TOSHIBA

User’s Manual

Qosmio G30

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TOSHIBA Qosmio G30 Portable Personal Computer User's Manual

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CE

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Supplementary Information:	“The product complies with the requirements of the Low Voltage Directive 73/23/EEC, the EMC Directive 89/336/EEC and/or the R&TTE Directive 1999/5/EEC.”

This product is carrying the CE-Mark in accordance with the related European Directives. The party responsible for CE-Marking is TOSHIBA Europe GmbH, Hammfelddamm 8, 41460 Neuss, Germany.

The complete and official EU Declaration of Conformity can be found on TOSHIBA’s web site http://epps.toshiba-teg.com on the Internet.

Modem warning notice

Conformity Statement

The equipment has been approved to [Commission Decision “CTR21”] for pan-European single terminal connection to the Public Switched Telephone Network (PSTN).

However, due to differences between the individual PSTNs provided in different countries/regions the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point.

In the event of problems, you should contact your equipment supplier in the first instance.

Network Compatibility Statement

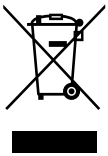
This product is designed to work with, and is compatible with the following networks. It has been tested to and found to conform with the additional requirements conditional in EG 201 121.

Germany	ATAAB AN005,AN006,AN007,AN009,AN010 and DE03,04,05,08,09,12,14,17
Greece	ATAAB AN005,AN006 and GR01,02,03,04
Portugal	ATAAB AN001,005,006,007,011 and P03,04,08,10
Spain	ATAAB AN005,007,012, and ES01
Switzerland	ATAAB AN002
All other countries/regions	ATAAB AN003,004

Specific switch settings or software setup is required for each network, please refer to the relevant sections of the user guide for more details.

The hookflash (timed break register recall) function is subject to separate national type approvals. It has not been tested for conformity to national type regulations, and no guarantee of successful operation of that specific function on specific national networks can be given.

Following information is only for EU-member states:



The use of the symbol indicates that this product may not be treated as household waste. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

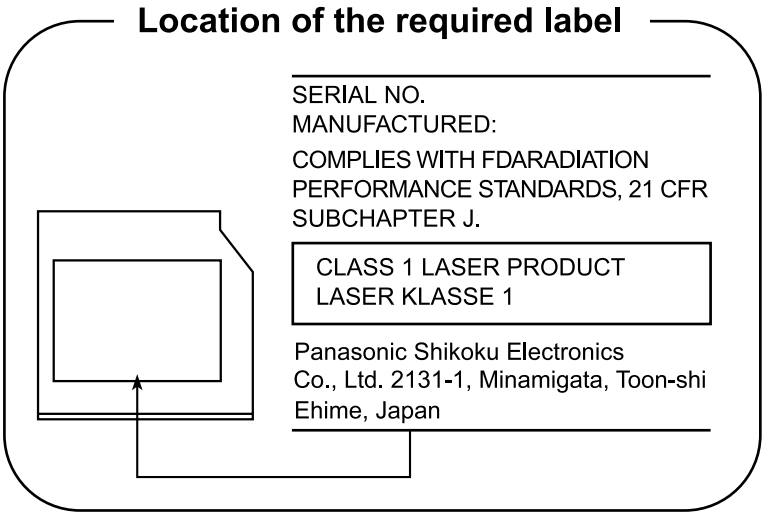
Optical disc drive safety instructions

Be sure to check the international precautions at the end of this section.

Panasonic Shikoku

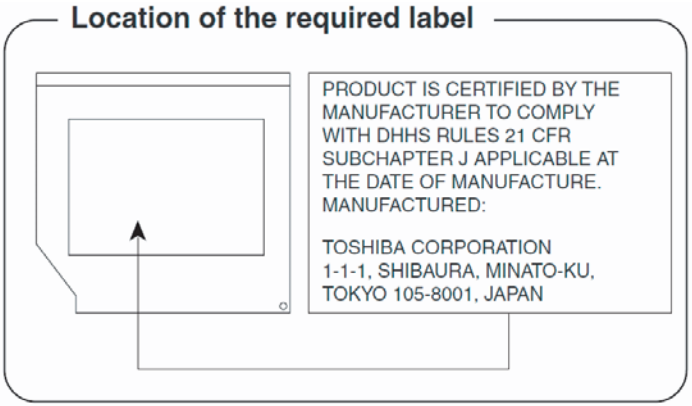
DVD Super Multi with Double Layer Recording UJ-85J

- *The DVD Super Multi drive with Double Layer Recording model employs a laser system. To ensure proper use of this product, please read this instruction manual carefully and retain for future reference. Should the unit ever require maintenance, contact an authorized service location.*
- *Use of controls, adjustments or the performance of procedures other than those specified may result in hazardous radiation exposure.*
- *To prevent direct exposure to the laser beam, do not try to open the enclosure.*



HD DVD-ROM drive TS-L802A

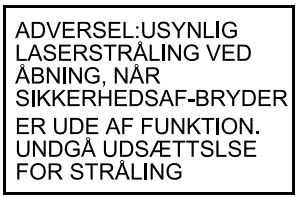
- *The HD DVD-ROM drive employs a laser system. To ensure proper use of this product, please read this instruction manual carefully and retain for future reference.*
  Should the unit ever require maintenance, contact an authorized service location.
- *Use of controls, adjustments or the performance of procedures other than those specified may result in hazardous radiation exposure.*
- *To prevent direct exposure to the laser beam, do not try to open the enclosure.*


Location of the required label
PRODUCT IS CERTIFIED BY THE MANUFACTURER TO COMPLY WITH DHHS RULES 21 CFR SUBCHAPTER J APPLICABLE AT THE DATE OF MANUFACTURE.
MANUFACTURED:
TOSHIBA CORPORATION
1-1-1, SHIBAURA, MINATO-KU,
TOKYO 105-8001, JAPAN

International precautions

CAUTION: *This appliance contains a laser system and is classified as a "CLASS 1 LASER PRODUCT." To use this model properly, read the instruction manual carefully and keep this manual for your future reference. In case of any trouble with this model, please contact your nearest "AUTHORIZED service station." To prevent direct exposure to the laser beam, do not try to open the enclosure.*

VORSICHT: *Dieses Gerät enthält ein Laser-System und ist als "LASERSCHUTZKLASSE 1 PRODUKT" klassifiziert. Für den richtigen Gebrauch dieses Modells lesen Sie bitte die Bedienungsanleitung sorgfältig durch und bewahren diese bitte als Referenz auf. Falls Probleme mit diesem Modell auftreten, benachrichtigen Sie bitte die nächste "autorisierte Service-Vertretung". Um einen direkten Kontakt mit dem Laserstrahl zu vermeiden darf das Gerät nicht geöffnet werden.*



ADVARSEL: *Denne mærking er anbragt udvendigt på apparatet og indikerer, at apparatet arbejder med laserstråler af klasse 1, hviket betyder, at der anvendes laserstrlier af svageste klasse, og at man ikke på apparatets yderside kan bilve udsat for utilladellg kraftig stråling.*

APPARATET BOR KUN ÅBNES AF FAGFOLK MED SÆRLIGT KENDSKAB TIL APPARATER MED LASERSTRÅLER!

Indvendigt i apparatet er anbragt den her gengivne advarselsmækning, som advarer imod at foretage sådanne indgreb i apparatet, at man kan komme til at udsatte sig for laserstråling.

OBS! *Apparaten innehåller laserkomponent som avger laserstråining överstigande gränsen för laserklass 1.*

VAROITUS. *Suojakoteloa si saa avata. Laite sisältää laserdiodin, joka lähetää näkymätöntä silmilie vaarallista lasersäteilyä.*

CAUTION: *USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED IN THE OWNER'S MANUAL MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.*

VORSICHT: *DIE VERWENDUNG VON ANDEREN STEUERUNGEN ODER EINSTELLUNGEN ODER DAS DURCHFÜHREN VON ANDEREN VORGÄNGEN ALS IN DER BEDIENUNGSANLEITUNG BESCHRIEBEN KÖNNEN GEFÄHRLICHE STRAHLENEXPOSITIONEN ZUR FOLGE HABEN.*

Preface

Congratulations on your purchase of the Qosmio G30 series computer. This powerful notebook computer provides excellent expansion capability, includes multimedia functionality, and is designed to provide years of reliable, high-performance computing.

This computer family is equipped with a built-in TV tuner. To watch a TV program or play CD/DVD before Windows starts, press the TV button or the CD/DVD button (or the same buttons on the remote control) respectively during Windows startup. When Windows is running, you can display or record a TV program using the My TV feature of Media Center.

This manual tells how to set up and begin using your Qosmio G30 computer. It also provides detailed information on configuring your computer, basic operations and care, using optional devices and troubleshooting.

If you are a new user of computers or if you're new to portable computing, first read over the *Introduction* and *The Grand Tour* chapters to familiarize yourself with the computer's features, components and accessory devices. Then read *Getting Started* for step-by-step instructions on setting up your computer.

If you are an experienced computer user, please continue reading the preface to learn how this manual is organized, then become acquainted with this manual by browsing through its pages. Be sure to read the *Special features* section of the Introduction, to learn about features that are uncommon or unique to this computer, as well as the section on *HW Setup*, to understand how to setup and configure these features.

If you are going to install PC Cards or connect external devices such as a monitor, be sure to read Chapter 9, *Optional Devices*.

Manual contents

This manual is composed of the following eleven chapters, some appendixes, a glossary and an index.

Chapter 1, *Introduction*, is an overview of the computer's features, capabilities, and options.

Chapter 2, *The Grand Tour*, identifies the components of the computer and briefly explains how they function.

Chapter 3, *Getting Started*, provides a quick overview of how to begin operating your computer and gives tips on safety and designing your work area.

Chapter 4, *Operating Basics*, describes the basic operations of your computer and highlights precautions that should be taken when using it, as well as detailing the handling of CD and DVD media.

Chapter 5, *The Keyboard*, describes special keyboard functions including the keypad overlay and hot keys.

Chapter 6, *Power*, gives details on the computer's power resources and battery save modes, and describes how to set a password.

Chapter 7, *HW Setup*, explains how to configure the computer using the HW Setup program.

Chapter 8, *Using the Remote Controller, Front operation panel and QosmioPlayer*, explains how to use the Remote Controller on Windows XP Media Center Edition models as well as provides information about QosmioPlayer.

Chapter 9, *Optional Devices*, describes the optional hardware available.

Chapter 10, *Troubleshooting*, provides helpful information on how to perform some diagnostic tests, and suggests courses of action if the computer doesn't seem to be working properly.

Chapter 11, *Legal Footnotes*, provides Legal Footnotes information related to your computer.

The *Appendixes* provide technical information about your computer.

The *Glossary* defines general computer terminology and includes a list of acronyms used in the text.

The *Index* quickly directs you to the information contained in this manual.

Conventions

This manual uses the following formats to describe, identify, and highlight terms and operating procedures.

Abbreviations

On first appearance, and whenever necessary for clarity, abbreviations are enclosed in parentheses following their definition. For example: Read Only Memory (ROM). Acronyms are also defined in the Glossary.

Icons

Icons identify ports, dials, and other parts of your computer. The indicator panel also uses icons to identify the components it is providing information on.

Keys

The keyboard keys are used in the text to describe many computer operations. A distinctive typeface identifies the key top symbols as they appear on the keyboard. For example, **Enter** identifies the Enter key.

Key operation

Some operations require you to simultaneously use two or more keys. We identify such operations by the key top symbols separated by a plus sign (**+**). For example, **Ctrl + C** means you must hold down **Ctrl** and at the same time press **C**. If three keys are used, hold down the first two and at the same time press the third.

ABC When procedures require an action such as clicking an icon or entering text, the icon's name or the text you are to type in is represented in the typeface you see to the left.

Display

ABC Names of windows or icons or text generated by the computer that appear on its display screen are presented in the type face you see to the left.

Messages

Messages are used in this manual to bring important information to your attention. Each type of message is identified as shown below.

Pay attention! A caution informs you that improper use of equipment or failure to follow instructions may cause data loss or damage your equipment.

Please read. A note is a hint or advice that helps you make best use of your equipment.

Indicates a potentially hazardous situation, which could result in death or serious injury, if you do not follow instructions.

General Precautions

TOSHIBA computers are designed to optimize safety, minimize strain and withstand the rigors of portability. However, certain precautions should be observed to further reduce the risk of personal injury or damage to the computer.

Be certain to read the general precautions below and to note the cautions included in the text of the manual.

Creating a computer-friendly environment

Place the computer on a flat surface that is large enough for the computer and any other items you are using, such as a printer.

Leave enough space around the computer and other equipment to provide adequate ventilation. Otherwise, they may overheat.

To keep your computer in prime operating condition, protect your work area from:

- Dust, moisture, and direct sunlight.
- Equipment that generates a strong electromagnetic field, such as stereo speakers(other than speakers that are connected to the computer) or speakerphones.
- Rapid changes in temperature or humidity and sources of temperature change such as air conditioner vents or heaters.
- Extreme heat, cold, or humidity.
- Liquids and corrosive chemicals.

Stress injury

Carefully read the *Instruction Manual for Safety and Comfort*. It contains information on the prevention of stress injuries to your hands and wrists that can be caused by extensive keyboard use. Chapter 3, *Getting Started*, also includes information on work space design, posture and lighting that can help reduce physical stress.

Heat injury

- Avoid prolonged physical contact with the computer. If the computer is used for long periods, its surface can become very warm. While the temperature will not feel hot to the touch, if you maintain physical contact with the computer for a long time, for example if you rest the computer on your lap or if you keep your hands on the palm rest, your skin might suffer a low-heat injury.
- If the computer has been used for a long time, avoid direct contact with the metal plate supporting the various interface ports as this can become hot.
- The surface of the AC adaptor can become hot when in use but this condition does not indicate a malfunction. If you need to transport the AC adaptor, you should disconnect it and let it cool before moving it.
- Do not lay the AC adaptor on a material that is sensitive to heat as the material could become damaged.

Pressure or impact damage

Do not apply heavy pressure to the computer or subject it to any form of strong impact as this can damage the computer's components or otherwise cause it to malfunction.

PC Card overheating

Some PC Cards can become hot during prolonged use which may result in errors or instability in the operation of the device in question. In addition, you should also be careful when you remove a PC Card that has been used for a long time.

Mobile phones

Please be aware that the use of mobile phones can interfere with the audio system. The operation of the computer will not be impaired in any way, but it is recommended that a minimum distance of 30cm is maintained between the computer and a mobile phone that is in use.

Instruction Manual for Safety and Comfort

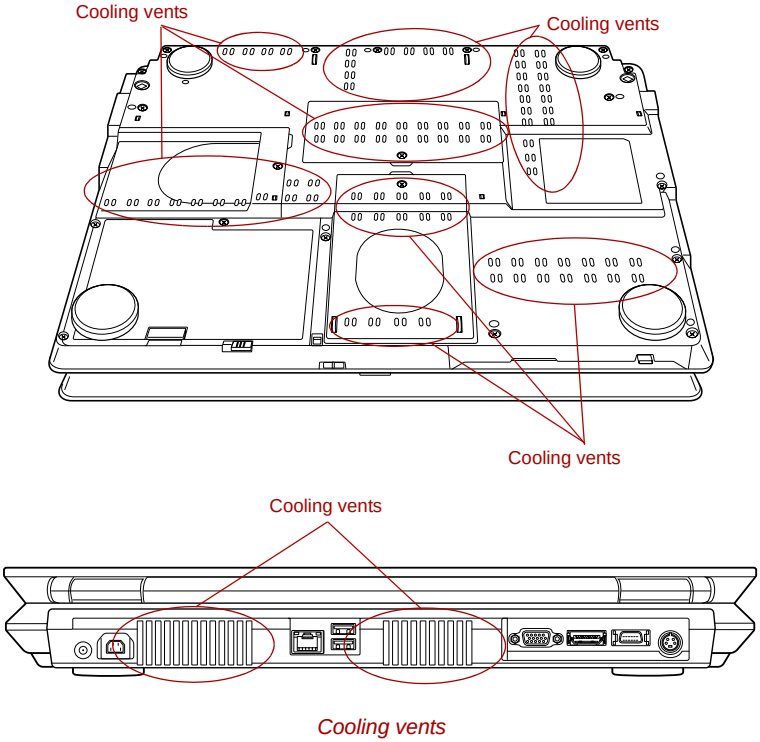
All important information on the safe and proper use of this computer is described in the enclosed Instruction Manual for Safety and Comfort. Be sure to read it before using the computer.

Cooling

1. Clean any dust accumulated on the computer's cooling vents. The cooling vents are located on the back and underside of the computer.

When you use your computer in a dusty area, dirt and debris may accumulate on the cooling vents at the under side of your unit. If this occurs, the accumulated dust can cause insufficient heat dissipation which may result in the computer shutting down during use. Carefully clean the dust from the vents using a vacuum cleaner.

2. Cooling vents on the underside and back side of the computer.



Cooling vents

To prevent possible overheating of the CPU, make sure the cooling fan's air intake is not blocked. The fan draws in air by creating a vacuum. If the fan is blocked, it could cause the CPU to run at a lower performance level or cause the computer to shut down. Loose items such as notebook and tissue paper, plastic wrappers, or other similar materials can block the air intake, preventing air from reaching the CPU. Do not use the computer on surfaces with objects that can be drawn in by the cooling fan.

Chapter 1

Introduction

This chapter provides an equipment checklist, and it identifies the computer's features, options and accessories.

Some of the features described in this manual may not function properly if you use an operating system that was not pre-installed by TOSHIBA.

Equipment checklist

Carefully unpack your computer, taking care to save the box and packaging materials for future use.

Hardware

Check to make sure you have all the following items:

- Qosmio G30 Portable Personal Computer
- AC adaptor and power cord
- Modular cable (optional)
- VIDEO-IN cable
- D-VIDEO OUT cable (model with DVD Super Multi drive)
- HDMI OUT cable (model with HD DVD drive)
- Remote Controller
- Infrared transmitter cable (optional)
- Antenna adaptor
- DVB-T Antenna (optional)
- Two AA manganese batteries (for Remote Controller)

Software

Microsoft® Windows XP Media Center Edition

- The following software is pre-installed:
  - Microsoft® Windows XP Media Center Edition
  - TOSHIBA Utilities
  - DVD Video Player
  - InterVideo WinDVD Creator
  - TOSHIBA Disc Creator
  - TOSHIBA Direct Disc Writer
  - TOSHIBA Power Saver
  - TOSHIBA ConfigFree
  - TOSHIBA Assist
  - TOSHIBA Controls
  - TOSHIBA PC Diagnostic Tool
  - TOSHIBA Touch and Launch
  - TOSHIBA TouchPad On/Off Utility
  - TOSHIBA Zooming Utility
  - TOSHIBA Picture Enhancement Utility (Is pre-installed with some models)
  - TOSHIBA SD Memory Card Format
  - TOSHIBA Drive Acoustic Silencer
  - TOSHIBA Hotkey Utility for Display Devices
  - TOSHIBA Display Device Change Utility
  - TOSHIBA Password Utility
  - TOSHIBA RAID Utility
  - HD DVD Player (Is pre-installed with HD DVD-ROM drive model)
  - Bluetooth Stack for Windows by TOSHIBA (Is pre-installed with some models)
  - Wireless Hotkey
  - Online Manual
- Product Recovery Media
- QosmioPlayer Recovery CD

Please refer to the included Qosmio HD DVD Guide for more information on using the HD DVD Player.

Documentation

- Qosmio G30 Portable Personal Computer User's Manual
- Qosmio G30 Quickstart
- Microsoft Windows XP Media Center Edition Getting Started booklet
- Instruction Manual for Safety and Comfort
- Qosmio HD DVD Guide
- QosmioPlayer Software License Agreement
- Warranty information

If any of the items are missing or damaged, contact your dealer immediately.

Features

The computer extensively uses TOSHIBA's advanced Large Scale Integration (LSI), Complementary Metal-Oxide Semiconductor (CMOS) technology to provide compact size, minimum weight, low power usage, and high reliability, and incorporates the following features and benefits:

Processor

Built-in	The computer is equipped with one of the following Intel® processor. ■ Intel® Core™ 2 Duo Processor, which incorporates 2MB Level-2 cache memory and supports Enhanced Intel® SpeedStep® Technology. ■ Intel® Core™ 2 Duo Processor, which incorporates 4MB Level-2 cache memory and supports Enhanced Intel® SpeedStep® Technology.

- *Some models in this series use Intel® Centrino® Duo Mobile Technology which is based on three separate components, the Intel® Core™ 2 Duo processor, Intel® PRO/Wireless network connection and the Mobile Intel® 945 Express Chipset family.*

Legal Footnote (CPU)[*1]

For more information on the CPU, please refer to the *Legal Footnotes* section in Chapter 11 or Click the *1 above.

Memory

Slots	256, 512, 1,024 or 2,048MB memory modules can be installed in the computer's two memory slots for a maximum of 4,096MB system memory.
Video RAM	The Video RAM specifications will differ depending on the type of graphics controller used in the computer. ■ nVIDIA GeForce Go 7600 model: 128/256MB of RAM is provided for video display.

Legal Footnote (Memory (Main System))*2

For more information regarding Memory (Main System), please refer to the *Legal Footnotes* section in Chapter 11 or click the *2 above.

Power

Battery pack	The computer is powered by one rechargeable lithium-ion battery pack.

Legal Footnote (Battery Life)*3

For more information regarding Battery Life, please refer to the *Legal Footnotes* section in Chapter 11 or click the *3 above.

RTC battery	The internal RTC battery backs up the Real Time Clock and calendar.
AC adaptor	The AC adaptor provides power to the system and recharges the batteries when they are low. It comes with a detachable power cord. As the AC adapter is universal, it can receive a range of AC voltages from 100 to 240 volts, however you should note that the output current varies among different models. Using the wrong adapter can damage your computer. Refer to the *AC adaptor* section in Chapter 2, *The Grand Tour*.

Disks

Hard disk drive	The following 5 types of hard disk drives can be installed in this computer. The capacity of each hard disk drive model is different. ■ 80.0 billion bytes (74.52 GB) ■ 100.0 billion bytes (93.16 GB) ■ 120.0 billion bytes (111.79 GB) ■ 160.0 billion bytes (149.04 GB) ■ 200.0 billion bytes (186.32 GB) Two computer models are available, a model with a single hard disk drive and a model with two hard disk drives.

*Legal Footnote (Hard Disk Drive (HDD) Capacity)*4*

For more information regarding Hard Disk Drive (HDD) Capacity, please refer to the *Legal Footnotes* section in Chapter 11 or click the *4 above.

USB floppy disk drive (optional)	The USB floppy disk drive accommodates either a 1.44MB or 720KB floppy disk and connects to a USB port.

Optical disc drive

DVD Super Multi drive Double Layer	Some models are equipped with a full-size DVD Super Multi drive module that lets you run CD's or DVD's without using an adaptor. The drive reads DVD-ROM's at a maximum 8x speed and CD-ROM's at a maximum 24x speed, and writes CD-R's at up to 24x speed, CD-RW's at up to 16x speed, DVD-R's and DVD+R's at up to 8x speed, DVD-RW's and DVD+RW's at up to 4x speed, DVD-R (Dual Layer) at up to 2x speed, DVD+R (Double Layer) at up to 2.4x speed and DVD-RAM at up to 5x speed, and supports the following formats: ■ CD-R ■ CD-RW ■ DVD-ROM ■ DVD-Video ■ CD-DA ■ CD-Text ■ Photo CD™ (single/multi-session) ■ CD-ROM Mode 1, Mode 2 ■ CD-ROM XA Mode 2 (Form1, Form2) ■ Enhanced CD (CD-EXTRA) ■ Addressing Method 2 ■ DVD-R ■ DVD-R (Dual Layer) ■ DVD-RW ■ DVD+R ■ DVD+R (Double Layer) ■ DVD+RW ■ DVD-RAM

An 8cm CD/DVD can be used with the external optical disc drive.

HD DVD-ROM drive	Some models are equipped with a full-size HD DVD-ROM drive module that lets you run CD's or DVD's without using an adaptor. The drive reads DVD-ROM's at a maximum 8x speed and CD-ROM's at a maximum 24x speed, and HD DVD's at a maximum 1x speed and writes CD-R's at up to 16x speed, CD-RW's at up to 10x speed, DVD-R's and DVD+R's at up to 4x speed, DVD-RW's and DVD+RW's at up to 4x speed, DVD-R (Dual layer) at up to 2x speed, DVD+R (Double Layer) at up to 2.4x speed and DVD-RAM at up to 3x speed, and supports the following formats in addition to DVD Super Multi drive: ■ HD DVD-ROM

*Legal Footnote (General HD DVD technology and playback)*5*

For more information regarding the General HD DVD technology and playback, please refer to the *Legal Footnotes* section in Chapter 11 or click the *5 above.

Display

The computer's internal LCD display panel supports high-resolution video graphics and can be set to a wide range of viewing angles for maximum comfort and readability.

Built-in	17" TFT LCD screen, 32 million colors, with one of the following resolutions: ■ WXGA+, 1440 horizontal x 900 vertical pixels ■ WUXGA CSV, 1920 horizontal x 1200 vertical pixels

*Legal Footnote (LCD)*6*

For more information regarding the LCD, please refer to the *Legal Footnotes* section in Chapter 11 or click the *6 above.

Graphics controller	Graphics controller maximizes display performance. Refer to *Display Controller and Video modes* section in Appendix B for more information.

*Legal Footnote (Graphics Processor Unit (“GPU”))*7*

For more information regarding the Graphics Processor Unit (“GPU”), please refer to the *Legal Footnotes* section in Chapter 11 or click the *7 above.

Keyboard

Built-in	The internal keyboard provides either 85 keys or 86 keys, an embedded numeric overlay, dedicated cursor control keys, and keys. Refer to Chapter 5, *The Keyboard* for details.

Pointing Device

Built-in Touch Pad	The integrated Touch Pad and control buttons in the palm rest allow control of the on-screen pointer and support functions such as the scrolling of windows.

Ports

External monitor	The analog VGA port provides support for VESA DDC2B compatible functions.
Universal Serial Bus (USB 2.0)	The computer supports multiple Universal Serial Bus ports that comply with the USB 2.0 standard.
i.LINK™ (IEEE1394)	This port allows high-speed data transfer to take place between the computer and external devices such as digital video cameras.

Slots

PC Card	The internal PC Card slot accommodates a single Type II (5mm) card.
ExpressCard	The internal ExpressCard slot accommodates a single ExpressCard/54 device.
Bridge media	This slot lets you insert SD Card, SD-IO, Mini-SD(with Adapter), Memory Stick (Pro), xD picture card and MultiMediaCard(MMC). Refer to Chapter 9, *Optional Devices*.

Multimedia

Sound system	The integrated sound system provides support for the computer's internal speakers and microphone, as allowing an external microphone and headphones to be connected via the appropriate jacks.
TV antenna port	Connect the antenna adaptor to this port to watch TV programs on your computer or record them.
S-Video-in Port	A camcorder or other recording device can be connected to this port via the S-Video-in cable (optional) for importing video data. Refer to the *S-Video-in* section in Chapter 9, *Optional Devices*.
S-Video out port	This S-Video out port lets you transfer NTSC or PAL data to external devices. Refer to the *TV* section in Chapter 9, *Optional Devices*.
D-Video out port	This D-Video out port lets you transfer 525i (480i), 525p (480p), 1125i (1080i) or 750p (720p) data to external devices. Refer to the *TV* section in Chapter 9, *Optional Devices*.
HDMI out port	HDMI out port can connect with Type A connector HDMI cable. One HDMI cable can send and receive video, audio and control signals.

The computer is equipped with either an HDMI or D-Video out port.

Headphone (S/PDIF) jack	This jack lets you connect digital speakers or a stereo headphone (16 ohm minimum). When you connect a digital speaker or headphones, the internal speaker is automatically disabled. This jack can be used also as S/PDIF jack and enables connection of optical digital correspondence apparatus.
Headphone jack	A 3.5mm mini headphone jack enables connection of stereo headphones or powered speakers.
Microphone jack	A 3.5mm mini microphone jack enables connection of a three-conductor microphone for monaural input.
Built-in TV Tuner	Built-in TV Tuner enables watching and recording TV programs.

Infrared receiver window	This is a sensor window that receives signals from the Remote Controller which is provided with your computer.
Infrared transmitter cable port	This computer includes a remote control unit, which allows you to control some of your computer's functions.
Remote Controller	Use this device to navigate when watching TV or playing CDs/DVDs.

Communications

Modem	An internal modem provides capability for data and fax communication. The speed of data transfer and fax depends on analog telephone line conditions. It has a modem jack for connecting to a telephone line. Both of V.90 and V.92 are supported only in USA, Canada, UK, France, Germany and Australia. Only V.90 is available in other regions.
LAN	The computer has built-in support for Ethernet LAN (10 megabits per second, 10BASE-T), Fast Ethernet LAN (100 megabits per second, 100BASE-TX) and Gigabit Ethernet LAN (1000 megabits per second, 1000BASE-T).
Bluetooth	Some computers in this series offer Bluetooth wireless communication functionality which eliminates the need for cables between electronic devices such as computers and printers. When implemented, Bluetooth provides a fast, reliable and secure means to achieve wireless communication in a small space.

Wireless LAN	Some computers in this series are equipped with a Wireless LAN mini-PCI card that is compatible with other LAN systems based on Direct Sequence Spread Spectrum/Orthogonal Frequency Division Multiplexing radio technology that complies with the IEEE 802.11 Standard (Revision A, B or G). ■ Theoretical maximum speed of 54Mbps for IEEE 802.11a or 802.11g ■ Theoretical maximum speed of 11Mbps for IEEE 802.11b ■ Frequency Channel Selection of 5GHz for IEEE 802.11a or 2.4GHz for 802.11b/g ■ Roaming over multiple channels ■ Card power management ■ Wired Equivalent Privacy (WEP) data encryption based on an 128-bit encryption algorithm ■ Wi-Fi Protected Access (WPA) support ■ Advanced Encryption Standard (AES) data encryption ■ Wake-up on Wireless LAN support

- *The numerical values shown above are the theoretical maximums for Wireless LAN standards. The actual values may differ.*
- *The transmission speed over the wireless LAN and the distance over which wireless LAN can reach may vary depending on surrounding electromagnetic environment, obstacles, access point design and configuration, and client design and software/hardware configurations. The Transmit Rate (at X Mbit/s) is the theoretical maximum speed under the IEEE802.11 (a/b/g) standard. The actual transmission speed will be lower than the theoretical maximum speed.*
- *The Wake-up on Wireless LAN function is effective only when it is connected with an Access Point. This function becomes invalid when the connection is broken.*

*Legal Footnote (Wireless LAN)*8*

For more information regarding Wireless LAN, please refer to the *Legal Footnotes* section in Chapter 11 or click the *8 above.

Wireless communication switch	This switch turns the Wireless LAN and Bluetooth functions on and off. Please note that all models are provided with a Wireless communication switch and some models are equipped with both Wireless LAN and Bluetooth functionality.

Security

Security lock slot	Connects a security lock to anchor the computer to a desk or other large object.

Special features

The following features are either unique to TOSHIBA computers or are advanced features which make the computer more convenient to use.

Hot keys	Hot keys are specific key combinations that let you quickly change the system configuration directly from the keyboard without running a system program.

The Hot key functions are supported only under Windows, not supported under QosmioPlayer.

Display automatic power off	This feature automatically cuts off power to the computer's internal display panel when there is no keyboard input for a specified time, with power being restored the next time a key is pressed. You can specify the time in the Monitor power off item of the **Basic Setup** tab within the **TOSHIBA Power Saver**.
HDD automatic power off	This feature automatically cuts off power to the hard disk drive when it is not accessed for a specified time, with power being restored when the hard disk drive is next accessed. You can specify the time in the HDD power off item of the **Basic Setup** tab within the **TOSHIBA Power Saver**.
System automatic Standby/Hibernation	This feature automatically shuts down the system into either Standby Mode or Hibernation Mode when there is no input or hardware access for a specified time. You can specify the time and also select either the System Standby or System Hibernation item of the **Basic Setup** tab within the **TOSHIBA Power Saver**.
Keypad overlay	A ten-key numeric keypad is integrated into the keyboard. Please refer to the *Keypad overlay* section in Chapter 5, *The Keyboard* for information on using this feature.
Power on password	Two levels of password security, supervisor and user, are available to prevent unauthorized access to your computer.

Instant security	A specific hot key function automatically blanks the computer's display and locks the system providing data security.
Intelligent power supply	A microprocessor in the computer's intelligent power supply detects the battery's charge, automatically calculates the remaining battery capacity and protects electronic components from abnormal conditions such as a voltage overload from the AC adaptor. You are able to monitor remaining battery capacity by using the Battery remaining item within the **TOSHIBA Power Saver**.
Battery save mode	This feature lets you configure the computer in order to save battery power. You can specify the various device settings in the Profile item within **TOSHIBA Power Saver**.
Panel power on/off	This feature automatically turns power to the computer off when the LCD display panel is closed, and turns it back on when the LCD display panel is opened. You can specify the required setting in the When I close the lid item of the **Setup Actions** tab within the **TOSHIBA Power Saver**.
Low battery automatic Hibernation Mode	When battery power is exhausted to the point that computer operation cannot be continued, the system automatically enters Hibernation Mode and shuts itself down. You can specify the setting in the **Setup Actions** tab within the **TOSHIBA Power Saver**.
Heat dispersal	To protect against overheating, the processor has an internal temperature sensor so that, if the computer's internal temperature rises to a certain level, the cooling fan is turned on or the processing speed is lowered. You can configure this feature using the Cooling Method item of the **Basic Setup** tab within the **TOSHIBA Power Saver**.
Hibernation	This feature lets you turn off the power to the computer without exiting from your software. The contents of main memory are automatically saved to the hard disk drive so that when you next turn the power on again, you can continue working right where you left off. Refer to the *Turning off the power* section in Chapter 3, *Getting Started*, for more details.

Standby	If you have to interrupt your work, you can use this feature to allow you to turn off power to the computer without exiting from your software. Data is maintained in the computer's main memory so that when you next turn on the power, you can continue working right where you left off.
TOSHIBA RAID	RAID (Redundant Array of Independent Disks) realizes high performance (striping = RAID0) or fault tolerance (mirroring = RAID1), which is configured by arraying multiple independent hard disk drives.

Utilities

This section describes the pre-installed utilities that come with the computer and details how to start them. For further information on their operation, please refer to each utility's online manual, help files or README.TXT file.

TOSHIBA Power Saver	To access the power management utility, click **start** followed by **Control Panel** followed by **Performance and Maintenance** and then click the **TOSHIBA Power Saver** icon.
HW Setup	This utility allows you to customize your hardware settings according to the way you work with the computer and the peripherals you use. To access this utility, click **start** followed by **Control Panel** followed by **Printers and Other Hardware** and then click the **TOSHIBA HWSetup** icon.
TOSHIBA Controls	This utility lets you do the following: ■ Buttons: Assign applications to the REC, Brightness down, Brightness up, DOLBY, TV-out buttons. To access this utility, click **start** followed by **Control Panel** followed by **Printers and Other Hardware** and then click the **Toshiba Controls** icon.

DVD Video Player	The DVD Video Player is used to play pre-recorded DVD video media and provides a tailored on-screen interface and specific functions to control all aspects associated with DVD playback. To access this utility, click **start**, followed by **All Programs** followed by **InterVideo WinDVD** and then click the **InterVideo WinDVD** application.
TOSHIBA Picture Enhancement Utility (Is pre-installed with some models)	This utility lets you change image quality according to your viewing environment lets you select external input settings for Video.
TOSHIBA ConfigFree	TOSHIBA ConfigFree is a suite of utilities that improve the ease and control of communication devices and network connections, help in the identification of communication problems and allow the creation of profiles if you need to switch between different locations and communication networks. To access this utility, click **start** followed by **All Programs** followed by **TOSHIBA** followed by **Networking** and then click **ConfigFree**.
TOSHIBA Assist	TOSHIBA Assist is a graphical user interface that provides access to specific tools, utilities and applications that make the use and configuration of the computer easier.
TOSHIBA Zooming Utility	This utility allows you to enlarge or reduce the icon size on the Windows Desktop, or the zoom factor associated with specific supported applications.
TOSHIBA Disc Creator	You can create CD/DVDs in several formats including audio CDs that can be played on a standard stereo CD player and data CD/DVDs to store the files and folders on your hard disk drive. This software can be used on a model with DVD Super Multi drive or HD DVD-ROM drive.
TOSHIBA Direct Disc Writer	TOSHIBA Direct Disc Writer is the packet writing software which provides the function which writes files and/or folders to DVD-RW, CD-RW and DVD+RW discs via a drive letter like a floppy disk or other removable disks.

HD DVD Player	This software can be used on a model with HD DVD-ROM drive. Please refer to the included Qosmio HD DVD Guide for more information on using the HD DVD Player.
TOSHIBA Hotkey Utility for Display Devices	This utility allows you to change both the active display device and its associated display resolution - you should use this utility in conjunction with the **Fn** + **F5** keys (to change the active display device) and the **Fn** + **Space** keys (to change the display resolution).
TOSHIBA PC Diagnostic Tool	The TOSHIBA PC Diagnostic Tool will display basic system configuration information and allow the functionality of some of the computer's built-in hardware devices to be tested. To access this utility, click **start** followed by **All Programs** followed by **TOSHIBA** followed by **Utilities** and then click **PC Diagnostic Tool**.
Bluetooth Stack for Windows by Toshiba	This software enables communication between the computer and external Bluetooth devices such as printers and mobile phones.

Bluetooth functions cannot be used in models that do not have a Bluetooth module installed.

TOSHIBA Touch and Launch	TOSHIBA Touch and Launch is a tool that allows you to perform various tasks easily using the Touch Pad. TOSHIBA Touch and Launch is useful in the following conditions. ■ To open a file located on the desktop whose icon is obscured by a window. ■ To open a page contained in the Internet Explorer Favorites menu. ■ To display the list of currently open windows and change the active window. Also TOSHIBA Touch and Launch provides the following functions by customizing the settings. ■ To open a file stored in a predefined folder. ■ To quickly launch your frequently used applications which have been registered.
TOSHIBA TouchPad On/Off Utility	This utility allows you to disable/enable the Touch Pad using the **Fn** + **F9** Hot key.

TOSHIBA RAID Utility	TOSHIBA RAID Utility is used to create or manage RAID array. To access this utility, click **start** followed by **All Programs** followed by **TOSHIBA** followed by **RAID** and then click **RAID Console**.
TOSHIBA Password Utility	The TOSHIBA Password utility allows you to set a password in order to restrict access to the computer.
Drive Acoustic Silencer	The CD/DVD Drive Acoustic Silencer utility allows you to configure the read speed at which the optical disc drive will operate. In use you can select either **Normal Mode**, which will operate the drive at its maximum speed for quick data access, or **Quiet Mode**, which operates the drive at single speed for audio CD playback and which can lessen the operational noise. This utility does not have any function when using DVD's.

Options

You are able to add a number of options and accessories in order to make your computer even more powerful and convenient to use. For reference, the following list details some of the items that are available from your reseller or TOSHIBA dealer:

Memory expansion	A 256MB, 512MB, 1,024MB, or 2048MB memory module (DDR2-667/533) can easily be installed in the computer.
Battery Pack	An additional battery pack can be purchased for use as either a spare or replacement. Two types of additional battery pack are available, 4,700mAh and 7,050mAh.
Universal AC Adaptor	If you frequently use your computer at more than one site, it may be convenient to purchase an additional AC adaptor to be kept at each site in order to remove the need to always carry the adaptor with you.
USB FDD kit	The USB floppy disk drive accommodates either a 1.44MB or 720KB floppy disk through connection to one of the computer's USB ports. In use, please be aware that, while you cannot format 720KB floppy disks under Windows XP, you are able to read and write to disks that have already been formatted.

Battery Charger	The optional battery charger allows you to charge extra battery packs outside of having to use the computer.
Bluetooth USB Adaptor	A Bluetooth adaptor that has a USB connector. Wireless communications can be carried out with Bluetooth-compatible equipment by connecting to the USB port of the computer. You can buy the module from a TOSHIBA dealer.
Bluetooth Wireless Mouse	The Bluetooth Wireless Mouse is a wireless optical mouse compatible with Bluetooth. You can buy the Bluetooth Wireless Mouse from a TOSHIBA dealer.
Bluetooth Wireless Stereo	The Bluetooth Wireless Stereo is a wireless stereo headphone set compatible with Bluetooth. You can buy the Bluetooth Wireless Stereo from a TOSHIBA dealer.
Bluetooth 2.0+EDR Module Kit	The Bluetooth 2.0+EDR Module Kit is an internal computer module which supports both Bluetooth V2.0 and EDR. You can buy the module from a TOSHIBA dealer.

Chapter 2

The Grand Tour

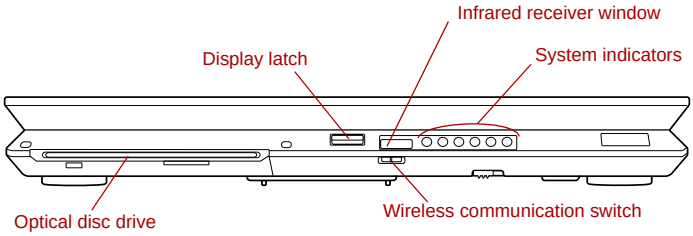
This chapter identifies the various components of your computer. Become familiar with each component before you operate the computer.

Legal Footnote (Non-applicable Icons)*9*

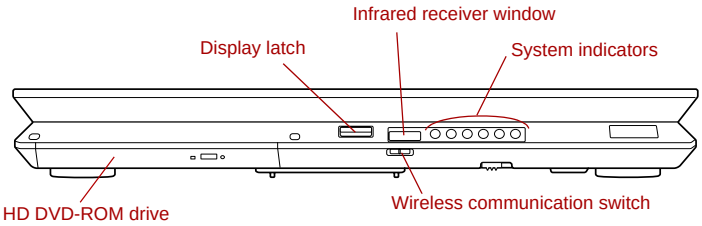
For more information regarding Non-applicable Icons, please refer to the *Legal Footnotes* section in Chapter 11 or click the *9 above.

Front with the display closed

The following figures show the computer's front with its display panel in the closed position.



Front of the computer with display closed (DVD Super Multi drive model)



Front of the computer with display closed (HD DVD-ROM drive model)

Optical disc drive	The computer is configured with a DVD Super Multi drive.
HD DVD-ROM drive	The computer is configured with a HD DVD-ROM drive.

The computer is equipped with either a DVD Super Multi drive or HD DVD-ROM drive.

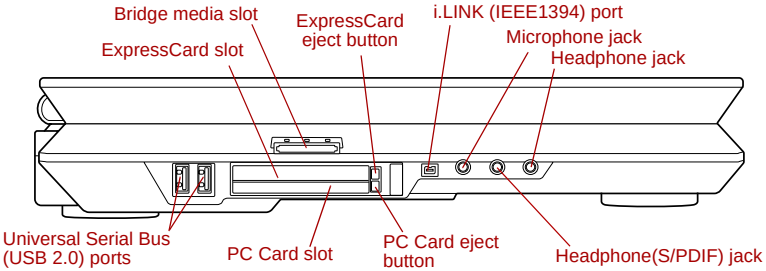
Display latch	This latch secures the LCD display panel in its closed position - push the latch in order to open the display for use.
Wireless communication switch	Slide this switch to the left to turn off Wireless LAN and Bluetooth functions. Slide it to the right to turn on the functions. All models are provided with a Wireless communication switch although only some models are equipped with both Wireless LAN and Bluetooth functions.

- *Turn Wi-Fi® and Bluetooth functionalities off when near a person who may have a cardiac pacemaker implant or other medical electric device. Radio waves may affect pacemaker or medical device operation, possibly resulting in serious injury. Follow the instruction of your medical device when using any Wi-Fi or Bluetooth functionality.*
- *Always turn off Wi-Fi or Bluetooth functionality if the computer is near automatic control equipment or appliances such as automatic doors or fire detectors. Radio waves can cause malfunction of such equipment, possibly resulting in serious injury.*
- *Do not use the Wi-Fi or Bluetooth functionalities near a microwave oven or in areas subject to radio interference or magnetic fields. Interference from a microwave oven or other source can disrupt Wi-Fi or Bluetooth operation.*

Infrared receiver window	This is a sensor window that receives signals from the remote control which is provided with your computer.
System indicators	These LED indicators allow you to monitor the status of various computer functions and are described in more detail within the *System indicators* section.

Left side

The following figure shows the computer's left side.



The left side of the computer

Universal Serial Bus (USB 2.0) ports	Two Universal Serial Bus ports, which comply with the USB 2.0 standard, are provided on the left hand side of the computer.

Keep foreign metal objects, such as screws, staples and paper clips, out of the USB connectors. Foreign metal objects can create a short circuit, which can cause damage and fire, possibly resulting in serious injury.

Please note that it is not possible to confirm the operation of all functions of all USB devices that are available. In view of this it may be noted that some functions associated with a specific device might not operate properly.

Bridge media slot	This slot lets you insert SD Card, SD-IO, Mini-SD(with Adapter), Memory Stick (Pro), xD picture card and MultiMediaCard(MMC). Refer to Chapter 9, *Optional Devices*.

Keep foreign metal objects, such as screws, staples and paper clips, out of the Bridge media slot. Foreign metal objects can create a short circuit, which can cause damage and fire, possibly resulting in serious injury.

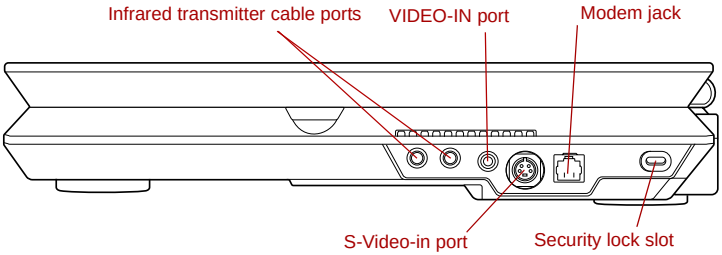
ExpressCard slot	This slot allows you to install a single ExpressCard device.
ExpressCard eject button	This button is used in order to remove an ExpressCard from within the computer.
PC Card slot	This slot can accommodate a single Type II, 16-bit or 32-bit (CardBus) PC Card device.
PC Card eject button	This button is used in order to remove a PC Card from within the computer.

Keep foreign metal objects, such as screws, staples and paper clips, out of the ExpressCard slot and PC Card slot. Foreign metal objects can create a short circuit, which can cause damage and fire, possibly resulting in serious injury.

i.LINK (IEEE1394) port	This port allows you to connect an external device, such as a digital video camera, to the computer for high-speed data transfer.
Microphone jack	A 3.5 mm mini microphone jack enables connection of a three-conductor mini jack for monaural microphone input.
Headphone (S/PDIF) jack	This jack lets you connect digital speakers or a stereo headphone (16 ohm minimum). When you connect a digital speaker or headphones, the internal speaker is automatically disabled. This jack can be used also as S/PDIF jack and enables connection of optical digital correspondence apparatus.
Headphone jack	A 3.5 mm mini headphone jack enables connection of stereo headphones.

Right side

The following figure shows the computer's right side.



The right side of the computer

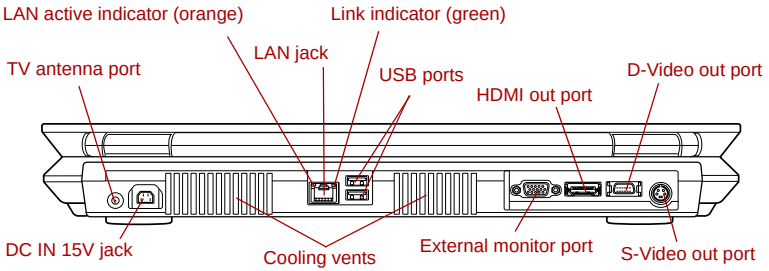
Infrared transmitter cable ports	Connect the infrared transmitter cable to the infrared transmitter cable port on the computer and to the set-top box.
VIDEO-IN port	With the bundled VIDEO-IN cable, the CATV or satellite set top boxes can be connected to the computer to view the channels. Please refer to Chapter 8, *Using the Remote Controller, Front operation panel and QosmioPlayer* for details on how to connect the computer with the VIDEO-IN cable.
S-Video-in port	A camcorder or other recording device can be connected to your computer via the S-Video-in cable for importing video data. Connect the cable to this port for this operation. Refer to the *S-Video-in* section in Chapter 9, *Optional Devices*.
Modem jack	The modem jack allows you use to attach a modular cable in order to connect the internal modem directly to a telephone line.

- *Connection to any communication line other than an analog phone line could cause a computer system failure.*
  - *Connect the built-in modem only to ordinary analog phone lines.*
  - *Never connect the built-in modem to a digital line (ISDN).*
  - *Never connect the built-in modem to the digital connector on a public telephone or to a digital private branch exchange (PBX).*
  - *Never connect the built-in modem to a key telephone system for residences or offices.*
- *Never operate your computer on AC power during a thunderstorm. If you see lightning or hear thunder, immediately turn off the computer. An electric surge caused by the storm, may result in a system failure, loss of data or hardware damage.*

Security lock slot	A security cable can be attached to this slot and then connected to a desk or other large object in order to deter theft of the computer.

Back side

The following figure shows the computer's back side.



The back side of the computer

TV antenna port	Connect the antenna adaptor to this port to watch TV programs on your computer or record them.
DC IN 15V jack	The AC adaptor connects to this jack in order to power the computer and charge its internal batteries. Please note that you should only use the model of adaptor supplied with the computer at the time of purchase - using the wrong adaptor can cause damage to the computer.
Cooling vents	The computer's cooling vents help keep the processor from overheating.

Do not block the cooling vents. Keep foreign metal objects, such as screws, staples and paper clips, out of the cooling vents. Foreign metal objects can create a short circuit, which can cause damage and fire, possibly resulting in serious injury.

LAN jack	This jack lets you connect to a LAN. The adaptor has built-in support for Ethernet LAN (10 megabits per second, 10BASE-T), Fast Ethernet LAN (100 megabits per second, 100BASE-TX) and Gigabit Ethernet LAN (1000 megabits per second, 1000BASE-T). The LAN has two indicators. Refer to Chapter 4, *Operating Basics*, for details.

- *Do not connect any cable other than a LAN cable to the LAN jack. It could cause damage or malfunction.*
- *Do not connect the LAN cable to a power supply. It could cause damage or malfunction.*

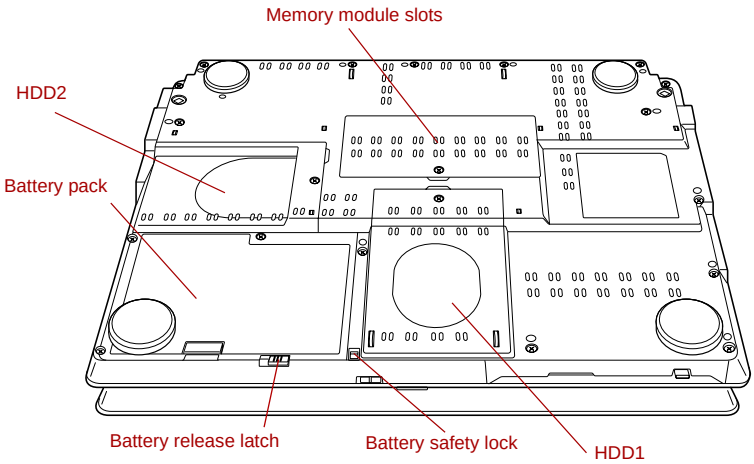
Link indicator (green)	This indicator glows green when the computer is connected to a LAN and the LAN is functioning properly.
LAN active indicator (orange)	This indicator glows orange when data is being exchanged between the computer and the LAN.
Universal Serial Bus (USB 2.0) ports	Two Universal Serial Bus ports, which comply with the USB 2.0 standard, are provided on the back side of the computer.
External monitor port	This port allows you to connect an external video display to the computer.
D-Video out port	This D-Video out port lets you transfer 525i (480i), 525p (480p), 1125i (1080i) or 750p (720p) data to external devices. Refer to *TV* section in Chapter 9, *Optional Devices*.
HDMI out port	HDMI out port can connect with Type A connector HDMI cable. One HDMI cable can send and receive video, audio and control signals.

The computer is equipped with either an HDMI or D-Video out port.

S-Video out port	The S-Video out port supports the connection of an optional S-Video cable to attach the computer to a television or similar device.

Underside

The following figure shows the underside of the computer. You should ensure that the display is closed before the computer is turned over to avoid causing any damage.



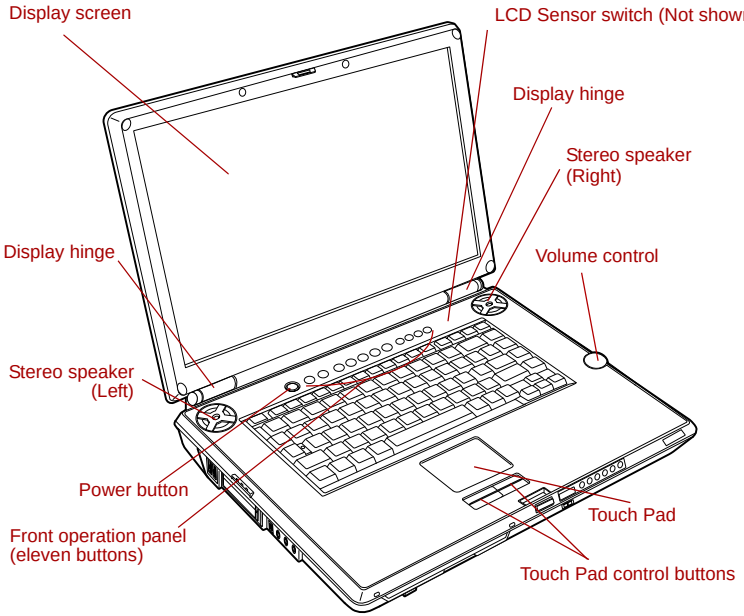
The underside of the computer

Memory module slots	The memory module slots are located here. The memory module slots allow for the installation, replacement and removal of additional memory modules. Please refer to the *Memory expansion* section in Chapter 9, *Optional Devices* for more information.
HDD1	This contains a hard disk drive pack, which can be removed and reinstalled. For more information on how to remove or reinstall the *Hard disk drive pack*, refer to the section on the in Chapter 9, *Optional Devices*.
HDD2	If your model has two hard disk drives, this contains a secondary hard disk drive pack. The secondary pack can be removed and reinstalled. For more information on how to remove or reinstall the hard disk drive pack, refer to the section on the *Hard disk drive pack* in Chapter 9, *Optional Devices*.

Battery safety lock	Slide this latch into its “Unlock” position in order to release the battery pack ready for removal.
Battery release latch	Slide and hold this latch into its “Unlock” position in order to release the battery pack ready for removal. For more detailed information on removing the battery pack please refer to Chapter 6, *Power*.
Battery pack	The battery pack provides power to the computer when the AC adaptor is not connected. For more detailed information on the use and operation of the battery pack please refer to Chapter 6, *Power*.

Front with the display open

This section shows the computer with the LCD display panel open. In order to open the display, simply push the display latch on the front of the computer, lift the display panel up and position it at a comfortable viewing angle for you.



The front of the Touch Pad model with the display open

The above illustration shows the DVD Super Multi drive model.

Display hinge	The display hinge allow the LCD display panel to be position at a variety of easy-to-view angles.

Display screen	The internal screen displays high-contrast text and graphics images up to the maximum resolution supported by the model in question. For example, an WXGA+ compatible model will support resolutions between 800x600 and 1440x900 pixels, while an WUXGA compatible model will support resolutions between 800x600 and 1920x1200 pixels. Please be aware that, when the computer is operating on the AC adaptor, the image displayed on the internal screen will be somewhat brighter than when it operates on battery power. This difference in brightness levels is intended to save power when running on batteries. For more information on the computer's display, please refer to the *Display Controller and Video modes* section in Appendix B.
harman/kardon **Stereo speakers**	The speakers will reproduce all of the sounds generated through the installed software, together with any alarms, such as that accompanying a low battery condition, that are generated by the system.

Keep foreign objects out of the speakers. Never allow metal objects, such as screws, staples and paper clips, to enter the computer or keyboard. Foreign metal objects can create a short circuit, which can cause computer damage and fire, possibly resulting in serious injury.

Front operation panel (eleven buttons)	Eleven buttons are available for use: TV, CD/DVD, Play/Pause, Stop, Previous, Next, Record, Brightness down, Brightness up, DOLBY, TV-out. These buttons allow you to manage Audio/Video, run applications and access utilities. Refer to Chapter 8, *Using the Remote Controller, Front operation panel and QosmioPlayer* for details.

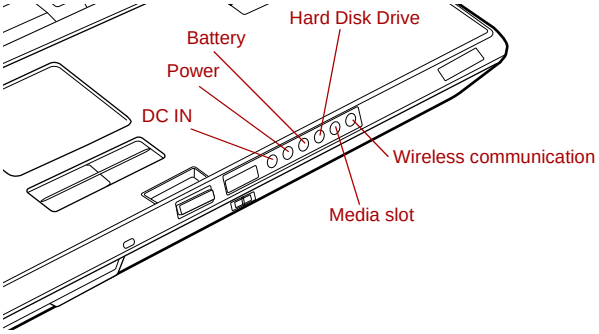
Power button	Press this button to turn the computer's power on and off. The Power button will glow blue when the computer's power is on.
Touch Pad	The Touch Pad mouse control device located in the center of the palm rest is used to control the movement of the on-screen pointer. For more information, please refer to the *Using the Touch Pad* section in Chapter 4, *Operating Basics*.
Touch Pad control buttons	The control buttons located below the Touch Pad allow you to select menu items or manipulate text and graphics as designated by the on-screen pointer.
LCD Sensor switch	This switch senses when the computer's display panel is either closed or opened and activates the Panel Power Off/On feature as appropriate. For example, when you close the display panel the computer enters Hibernation Mode and shuts itself down and then, when you next open the display, the computer will automatically start up and return you to the application you were previously working on. In order to set up and configure this feature you should use the TOSHIBA Power Saver - the default setting is "Enabled". Please refer to the TOSHIBA Power Saver and Panel Power Off/On items in Chapter 1, *Special features* for additional details on the available settings.

Do not put any magnetic objects close to this switch as they may cause the computer to automatically enter Hibernation Mode and shut down even if the Panel Power Off feature is disabled.

Volume control	Use this dial to adjust the volume of the internal stereo speakers and optional external stereo headphones (if connected). Turn the dial clockwise to decrease the volume and turn it counter-clockwise to increase the volume.

System indicators

LED system indicators next to their respective icons, glow when specific computer operations are in progress.



System indicators

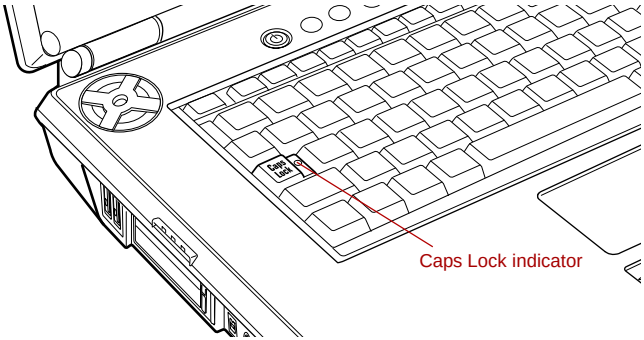
DC IN	The **DC IN** indicator normally glows blue when power is being correctly supplied from the AC power adaptor. However, If the output voltage from the adaptor is abnormal, or if the computer's power supply malfunctions, this indicator will flash orange.
Power	The **Power** indicator normally glows blue when the computer is switched on. However, if you switch the computer off into Standby Mode, this indicator will flash orange - approximately one second on, two seconds off - both while the system is shutting down and while it remains turned off.
Battery	The **Battery** indicator shows the condition of the battery's charge - blue indicates the battery is fully charged, orange indicates the battery is charging, and flashing orange indicates a low battery condition. Please refer to Chapter 6, *Power* for more information on this feature.
Hard Disk Drive	The **Hard Disk Drive** indicator glows blue whenever the computer is accessing the built-in hard disk drive.
Media slot	The **Media slot** indicator glows blue when the computer is accessing either the optical disc drive or the Bridge media slot.

Wireless communication	The **Wireless communication** indicator glows orange when the Bluetooth and wireless LAN functions are turned on. All models are provided with a Wireless Communication switch although only some models are equipped with both Wireless LAN and Bluetooth functions.

Keyboard indicators

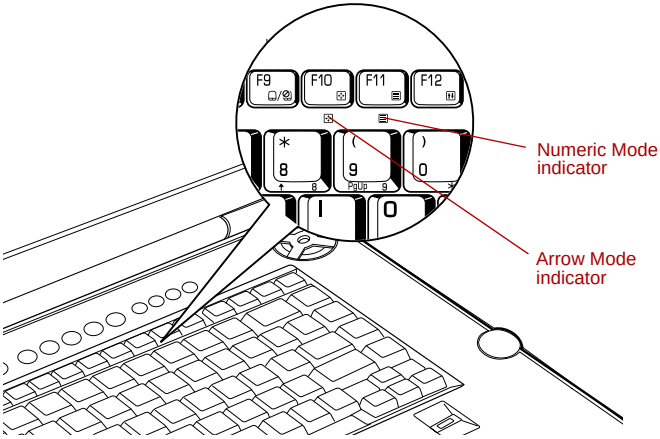
The following figures show the positions of the Caps Lock indicator and the keypad overlay indicators which show the following conditions:

- When the Caps Lock indicator glows, the keyboard will produce capitals when any letter is typed.
- When the Arrow Mode indicator glows, the keypad overlay allows you to use cursor functions.
- When the Numeric Mode indicator glows, the keypad overlay allows you to enter numbers.



Caps Lock indicator

Caps Lock	This indicator glows green when letter keys are locked into their uppercase format.



Keypad overlay indicators

Arrow mode	When the **Arrow mode** indicator lights green, you can use the gray labeled keys on the keypad overlay as cursor keys. Please refer to the *Keypad overlay* section in Chapter 5, *The Keyboard* for more information.
Numeric mode	When the **Numeric mode** indicator lights green, you can use the gray labeled keys on the keypad overlay for number entry. Please refer to the *Keypad overlay* section in Chapter 5, *The Keyboard* for more information.

Optical disc drives

Depending on its specification, the computer will be configured with either a DVD Super Multi drive or a HD DVD-ROM drive. This optical drive uses an ATAPI interface controller for CD and DVD operation and has an indicator at its front which will glows to indicate that it is in use.

For further information on loading and unloading discs, please refer to the *Using optical disc drives* section in Chapter 4, *Operating Basics*.

Region codes for DVD drives and media

DVD Super Multi drives and their associated media are manufactured according to the specifications of six marketing regions. When you purchase DVD Video media you should ensure that it matches the specification of your drive, otherwise it will not play properly.

Code	Region
1	Canada, United States
2	Japan, Europe, South Africa, Middle East
3	South East Asia, East Asia
4	Australia, New Zealand, Pacific Islands, Central America, South America, Caribbean
5	Russia, Indian Subcontinent, Africa, North Korea, Mongolia
6	China

Writable discs

This section describes the types of writable CD and DVD media available, and should be used in conjunction with the specification of your computer/optical drive in order to understand the type of discs that can be written. Please refer to Chapter 4, *Operating Basics* for further information.

CDs

- CD-R media can only be written to once - the recorded data cannot subsequently be erased or changed.
- CD-RW media, including multi-speed CD-RW discs, high-speed CD-RW discs and ultra-speed CD-RW discs, can be recorded to more than once.

DVDs

- DVD-R, DVD+R, DVD-R (Dual Layer) and DVD+R (Double Layer) media discs can only be written to once - the recorded data cannot subsequently be erased or changed.
- DVD-RW, DVD+RW and DVD-RAM media can be recorded to more than once.

Formats

The drives support the following formats:

- CD-ROM
- DVD-ROM
- DVD-R
- DVD-R (Dual Layer)
- DVD-RW
- DVD+R
- DVD+R (Double Layer)
- DVD+RW
- DVD-RAM
- DVD-Video
- CD-R
- CD-RW
- CD-DA
- CD-Text
- CD-ROM XA Mode 2 (Form1, Form2)
- CD-ROM Mode 1, Mode 2
- Photo CD™ (single/multi-session)
- Enhanced CD (CD-EXTRA)
- Addressing Method 2
- HD DVD-ROM (Single-sided Single-Layer)
- HD DVD-ROM (Single-sided Dual-Layer)
- HD DVD (Twin format disc)
- HD DVD-Video

Some types and formats of DVD-R (Dual Layer) and DVD+R (Double Layer) discs may be unreadable.

DVD Super Multi drive Double Layer

The full-size DVD Super Multi drive module allows you to record data to recordable CD's and DVD's as well as run either 12cm (4.72") CD's and DVD's without using an adaptor.

The read speed is slower at the center of a disc and faster at the outer edge.

DVD read	8 speed (maximum)
DVD-R write	8 speed (maximum)
DVD-R (Dual Layer) write	2 speed (maximum)
DVD-RW write	4 speed (maximum)
DVD+R write	8 speed (maximum)
DVD+R (Double Layer) write	2.4 speed (maximum)
DVD+RW write	4 speed (maximum)
DVD-RAM write	5 speed (maximum)
CD read	24 speed (maximum)
CD-R write	24 speed (maximum)
CD-RW write	16 speed (maximum, Ultra-speed media)

2.6GB and 5.2GB DVD-RAM media cannot be read from or written to.

HD DVD-ROM drive

The full-size HD DVD-ROM module allows you to record data to recordable CD's and DVD's as well as run either 12cm (4.72") CD's, DVD's and HD DVD's, and 8cm (3.15") CD's and DVD's without using an adaptor.

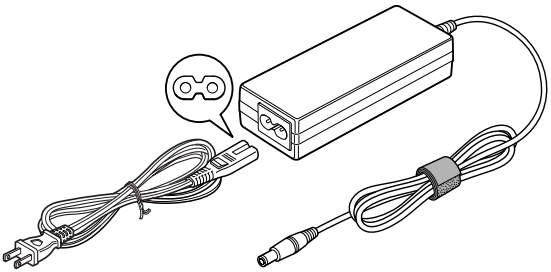
The read speed is slower at the center of a disc and faster at the outer edge.

HD DVD read	1 speed (maximum)
DVD read	8 speed (maximum)
DVD-R write	4 speed (maximum)
DVD-R (Dual Layer) write	2 speed (maximum)
DVD-RW write	4 speed (maximum)
DVD+R write	4 speed (maximum)
DVD+R (Double Layer) write	2.4 speed (maximum)
DVD+RW write	4 speed (maximum)
DVD-RAM write	3 speed (maximum)
CD read	24 speed (maximum)
CD-R write	16 speed (maximum)
CD-RW write	10 speed (maximum, Ultra-speed media)

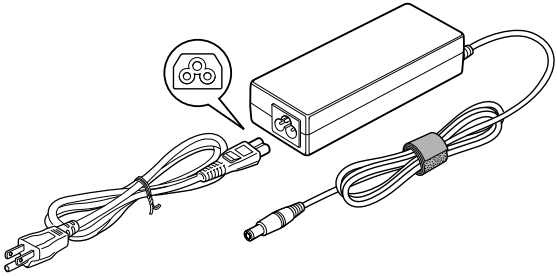
AC adaptor

The AC adaptor can automatically adjust to any voltage ranging from 100 to 240 volts and to a frequency of either 50 or 60 hertz, enabling you to use this computer in almost any country/region. The adaptor converts AC power to DC power and reduces the voltage supplied to this computer.

To recharge the battery, simply connect the AC adaptor to a power source and to the computer. Please refer to Chapter 6, *Power* for further information.



The AC adaptor (2-pin plug)



The AC adaptor (3-pin plug)

- *Depending on the model in question, either a 2-pin or 3-pin adaptor/power lead will be bundled with the computer.*
- *Do not use a 3-pin to 2-pin conversion plug.*
- *The supplied power cord conforms to safety rules and regulations in the region the product is bought and should not be used outside of this region. In order to use the adaptor/computer in other regions, you should please buy a power cord that conforms to the safety rules and regulations in that particular region.*

Always use the TOSHIBA AC adaptor that was provided with your computer and the TOSHIBA Battery Charger (that may have been provided with your computer), or use AC adaptors and battery chargers specified by TOSHIBA to avoid any risk of fire or other damage to the computer. Use of an incompatible AC adaptor or Battery Charger could cause fire or damage to the computer possibly resulting in serious injury.

Chapter 3

Getting Started

This chapter provides basic information to start using your computer. It covers the following topics:

- *All users should be sure to read the section Starting up for the first time.*
- *Be sure to read the enclosed Instruction Manual for Safety and Comfort for information on the safe and proper use of this computer. It is intended to help you be more comfortable and productive while using a notebook computer. By following the recommendations in it you may reduce your chance of developing a painful or disabling injury to your hand, arms, shoulders or neck.*

- Setting up your work space - for your health and safety
- Connecting the AC adaptor
- Opening the display
- Turning on the power
- Starting up for the first time
- Turning off the power
- Restarting the computer
- Restoring the pre-installed software

- *Use a virus-check program and make sure it is updated regularly.*
- *Never format storage media without checking its content. Formatting destroys all stored data.*
- *It is a good idea to periodically back up the internal hard disk drive or other main storage device to external media. General storage media is not durable or stable over long periods of time and under certain conditions may result in data loss.*
- *Before you install a device or application, save any data in memory to the hard disk drive or other storage media. Failure to do so may result in the loss of data.*

Setting up your work space

Establishing a comfortable work site is important for you and your computer. A poor work environment or stressful work habits can result in discomfort or serious injury from repetitive strain to your hands, wrists or other joints. Proper ambient conditions should also be maintained for the computer's operation. This section discusses the following topics:

- General conditions
- Placement of the computer
- Seating and posture
- Lighting
- Work habits

General conditions

In general, if you are comfortable, so is your computer, but read the following to make sure your work site provides a proper environment.

- Select a work area that has:
  - a well-designed and functioning ventilation system that does not forcefully direct air on you
  - good air circulation
  - a comfortable ambient temperature and relative humidity.
- Never place your PC where it will be exposed to excess heat, such as in direct sunlight, an unventilated vehicle or near a heater. This may result in a system failure, malfunction, loss of data or damage to PC.
- Never place your PC in a location where it will be exposed to extremely low temperatures. This may result in a system failure, malfunction or loss of data.
- Never subject your PC to sudden temperature variations. This may result in condensation, causing a system failure, malfunction or loss of data.
- Do not expose your PC to dusty environments. If dust gets inside the PC, it could cause a system failure, malfunction or loss of data. If dust contaminates the PC, do not turn on the power. Take it to an authorized Toshiba service provider before you use it.
- Never place your PC near an object that generates a magnetic field, such as a speaker or TV. Do not wear magnetic bracelets while using your PC. Exposure to magnetic fields can cause system failure, malfunction or loss of data.
- Never place a heavy object on the PC and be careful not to drop a heavy object onto the PC. It could damage the PC or cause system failure.
- Never use benzene, thinner or other chemicals when cleaning the PC, AC adaptor, or storage device. The use of benzene, thinner or other chemicals may result in deterioration, deformation or discoloration of those items and the loss of data.

- Make sure the AC power cord connects to an outlet that is close to the computer and easily accessible.
- The temperature should be 5 to 35 degrees Centigrade (41 to 95 degrees Fahrenheit) and the relative humidity should be 20 to 80 percent.
- Keep the computer free of dust, moisture, and exposure to direct sunlight.
- Some parts of the computer, including data storage media, can be damaged by magnets. Do not place the computer near magnetic objects or bring magnetic objects close to the computer. Be careful of objects, such as stereo speakers, that produce strong magnetic fields during operation. Also, be careful with metal objects, such as bracelets, which can be inadvertently magnetized.
- Do not operate the computer in close proximity to a mobile phone.
- Leave ample ventilation room for the fan. Do not block the vents.
- If the PC interferes with radio equipment, turn the PC power off immediately. Such interference could cause equipment malfunction.
- Never place your PC on a shaky table, uneven, tilted surface or other unstable location. Your PC may fall, causing damage to the PC or possibly injury.
- Never leave the power to your PC on continuously for more than 24 hours. Turn the power off when this product is not in use.
- Always avoid abrupt changes of temperature or humidity.
- Never place close to heat radiating appliances such as a heater.
- Never place close to corrosive chemicals.
- Never place close to magnetic field radiating appliances such as a stereo speaker.
- Always place this product on a flat surface.
- Provide a sufficient space behind the PC to allow easy adjustment of the display panel.
- Always provide sufficient space around the PC to ensure adequate ventilation.
- Always provide sufficient space for operating a mouse and other peripheral devices.

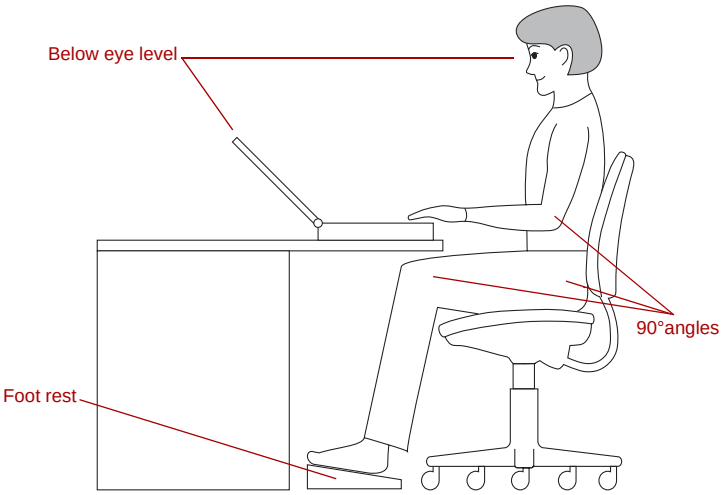
Placement of the computer

Position the computer and peripheral devices to provide comfort and safety.

- Position your LCD display panel or place your monitor in an appropriate position to help reduce awkward postures and overhead glare. For example:
  - Position LCD directly in front of you and at a comfortable distance away.
  - Position LCD so the top of the screen is at or slightly below eye level. A display screen that is too high or too low can cause awkward postures and possibly fatigue muscles that support the head.
  - Rest your eyes periodically by focusing on objects that are farther away.
- If you use a paper holder, set it at about the same height and distance as the computer.

Seating and posture

Maintain a comfortable working posture when using your PC where your body joints are naturally aligned to reduce stress on different parts of your body. Consider the following:



Posture and positioning of the computer

- Keep hands, wrists, and forearms straight, in-line and roughly parallel to the floor.
- Keep head level, or bent slightly forward, forward facing, and balanced. Generally the head is in-line with the torso.
- Keep shoulders relaxed and let upper arms hang normally at the side of the body.
- Keep elbows in close to the body and bent.
- Keep feet fully supported by floor or foot rest.
- Keep back fully supported with appropriate lumbar support when sitting vertical or leaning back slightly.
- Keep thighs and hips supported by a well-padded seat cushion and generally parallel to the floor.
- Keep knees about the same height as the hips with the feet slightly forward.

Lighting

Select the right level of illumination and place your PC appropriately to minimize glare from overhead lights, desk lamps and windows. Glare on the LCD or monitor may cause eye strain, eye fatigue or headaches.

Consider the following suggestions regarding lighting your work environment:

- Position the PC so that the light source does not shine or reflect directly onto the display or shine or reflect directly into the eyes of the user.
- Shield the PC from direct light by using tinted windows or by installing blinds or a screen.
- Use soft, indirect lighting.
- Adjust the display panel to provide maximum visibility.

Work habits

A key to avoiding discomfort or injury from repetitive strain is to vary your activities. If possible, schedule a variety of tasks into your workday. If you must spend long periods at the computer, finding ways to break up the routine can reduce stress and improve your efficiency.

- Sit in a relaxed posture. Good positioning of your chair and equipment as described earlier can reduce tension in your shoulders or neck and ease back strain.
- Vary your posture frequently.
- Occasionally stand up and stretch or exercise briefly.
- Exercise and stretch your wrists and hands a number of times during the day.
- Frequently, look away from the computer and focus your eyes on a distant object for several seconds, for example 30 seconds every 15 minutes.
- Take frequent short breaks instead of one or two long breaks, for example, two or three minutes every half hour.
- When you use a PC, rest your eyes periodically and relax or stretch your muscles to avoid strain. If you experience discomfort while operating the PC, stop immediately and rest. Continuous operation for long periods without adequate rest may cause pain in the arms, wrists, hands, back, neck or other parts of the body. If pain persists despite rest, consult your doctor.

A number of books are available on ergonomics and repetitive strain injury or repetitive stress syndrome. For more information on these topics or for pointers on exercises for such stress points as hands and wrists, please check with your library or book vendor. Also refer to the computer's *Instruction Manual for Safety & Comfort.*

Strategic Rest Breaks

Take short, strategically spaced rest breaks to avoid eye strain and body discomforts.

For more specific recommendations on the safety and comfort of your computer environment, customers in the United States may visit the United States Department of Labor, Occupational Safety & Health Administration website at: http://www.osha.gov/SLTC/etools/computerworkstations/

Other Things to Note

- Never turn off the power while an application is running. Doing so could cause loss of data.
- Use a virus-check program and make sure it is updated regularly.
- Never turn off the power, disconnect an external storage device or remove storage media during data read/write. Doing so can cause data loss.
- Never format storage media without checking its content. Formatting destroys all stored data.
- It is a good idea to periodically back up the internal hard disk or other main storage device to external media. General storage media is not durable or stable over long periods of time and under certain conditions may result in data loss.
- Before you install a device or application, save any data in memory to the hard disk drive or other storage media. Failure to do so may result in the loss of data.

Connecting the AC adaptor

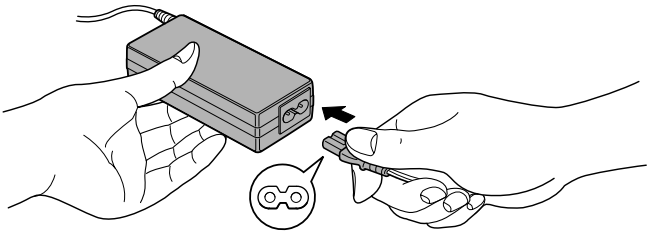
Attach the AC adaptor when you need to charge the battery or you want to operate from AC power. It is also the fastest way to get started, because the battery pack will need to be charged before you can operate from battery power.

The AC adaptor can be connected to any power source supplying from 100 to 240 volts and 50 or 60 hertz. For details on using the AC adaptor to charge the battery pack, refer to Chapter 6, *Power*.

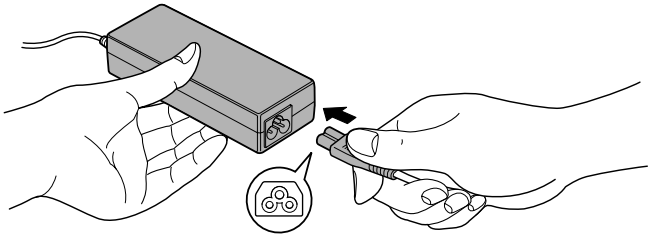
- *Always use the TOSHIBA AC adaptor that was provided with your computer and the TOSHIBA Battery Charger (that may have been provided with your computer), or use AC adaptors and battery chargers specified by TOSHIBA to avoid any risk of fire or other damage to the computer. Use of an incompatible AC adaptor or Battery Charger could cause fire or damage to the computer possibly resulting in serious injury. TOSHIBA assumes no liability for any damage caused by use of an incompatible adaptor or Battery Charger.*
- *Never plug the AC adaptor or Battery Charger into a power source that does not correspond to both the voltage and the frequency specified on the regulatory label of the unit. Failure to do so could result in a fire or electric shock, possibly resulting in serious injury.*
- *Always use or purchase power cables that comply with the legal voltage and frequency specifications and requirements in the country of use. Failure to do so could result in a fire or electric shock, possibly resulting in serious injury.*
- *The supplied power cord conforms to safety rules and regulations in the region the product is bought and should not be used outside this region. For use in other regions, please buy power cords that conform to safety rules and regulations in the particular region.*
- *Do not use a 3-pin to 2-pin conversion plug.*
- *When you connect the AC adaptor to the computer, always follow the steps in the exact order as described in the User's Manual. Connecting the power cable to a live electrical outlet should be the last step otherwise the adaptor DC output plug could hold an electrical change and cause an electrical shock or minor bodily injury when touched. As a general safety precaution, avoid touching any metal parts.*
- *Never place your computer or AC adaptor on a wooden surface, furniture, or any other surface that could be marred by exposure to heat since the computer base and AC adaptor's surface increase in temperature during normal use.*
- *Always place your computer or AC adaptor on a flat and hard surface that is resistant to heat damage.*

Refer to the enclosed Instruction Manual for Safety and Comfort for detailed precautions and handling instructions.

1. Connect the power cord to the AC adaptor.



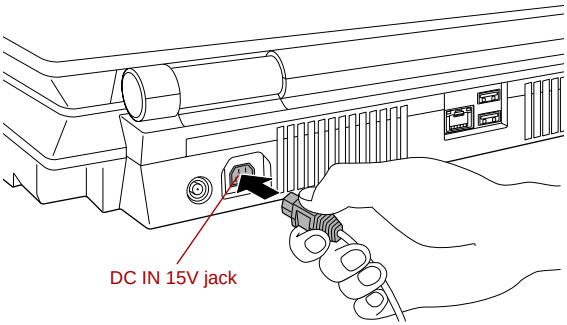
Connecting the power cord to the AC adaptor (2-pin plug)



Connecting the power cord to the AC adaptor (3-pin plug)

Depending on the model in question, either a 2-pin or 3-pin adaptor/power lead will be bundled with the computer.

2. Connect the AC adaptor's DC output plug to the DC IN 15V jack on the back side of the computer.



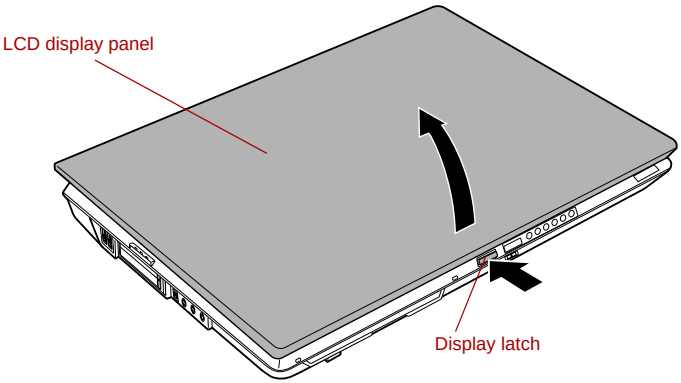
Connecting the adaptor to the computer

3. Plug the power cord into a live wall outlet - the **Battery** and **DC IN** indicators on the front of the computer should glow.

Opening the display

The computer's LCD display panel can be opened to a wide range of angles for optimal viewing.

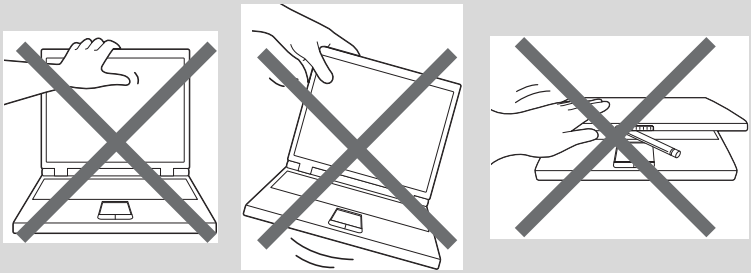
1. Push the display latch on the front of the computer to unlatch the LCD display panel.
2. While holding down the palm rest with one hand so that the main body of the computer is not raised, slowly lift the LCD display panel - this will allow the angle of the LCD display panel to be adjusted to provide optimum clarity.



Opening the display

Use reasonable care when opening and closing the LCD display panel. Opening it vigorously or slamming it shut could damage the computer.

- *As the LCD display panel cannot be opened until 180 degrees, please be careful of the angle when flipping open the LCD display panel.*
- *Be careful not to open the LCD display panel too far as this could put stress on the display panel's hinges and cause damage.*
- *Do not press or push on the LCD display panel.*
- *Do not lift the computer by the LCD display panel.*
- *Do not close the LCD display panel with pens or any other objects left in between the LCD display panel and the keyboard.*
- *When opening or closing the LCD display panel, place one hand on the palm rest to hold the computer in place and use the other hand to slowly open or close the LCD display panel (Do not use excessive force when opening or closing the LCD display panel).*



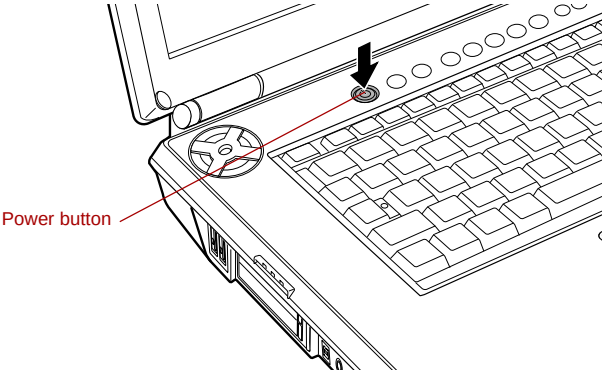
Turning on the power

This section describes how to turn on the power - the **Power** indicator will then indicate the status. Please refer to the *Power indicators* section in Chapter 6, *Power* for more information.

- *After you turn on the power for the first time, do not turn it off until you have set up the operating system. Please refer to the section* Starting up for the first time *for more information.*
- *If a USB floppy disk drive is connected, please make sure that it is empty - if a floppy disk is in the drive, press the eject button and remove it.*
- *Volume cannot be adjusted during Windows Setup.*

1. Open the computer's LCD display panel.

2. Press and hold the computer's power button for two or three seconds.



Turning on the power

Starting up for the first time

When you first turn on the power, the initial screen that will be displayed will be the Microsoft Windows XP Startup Screen. To properly install the operating system you should follow the on-screen directions for each screen, taking note that you are able to click the **Back** button to return to the previous screen if required.

When it is displayed, be sure to read the **`Windows End User License Agreement`** *carefully.*

Turning off the power

The power can be turned off in one of three modes, either Shut Down (Boot) Mode, Hibernation Mode or Standby Mode.

Shut Down mode (Boot Mode)

When you turn off the power in Shut Down Mode no data will be saved and the computer will boot to the operating system's main screen the next time it is switched on.

1. If you have entered data, either save it to the hard disk drive or to other storage media.
2. Make sure all disk/disc activity has stopped before removing the CD/DVD or floppy disk.

- *Make sure the* **Hard Disk Drive** *indicator is off. If you turn off the power while a disk (disc) is being accessed, you can lose data or damage the disk.*
- *Never turn off the power while an application is running. Doing so could cause loss of data.*
- *Never turn off the power, disconnect an external storage device or remove storage media during data read/write. Doing so can cause data loss.*

3. Click **start** then click **Turn Off Computer** and from the **`Turn Off Computer`** menu select **Turn Off**.
4. Turn off the power to any peripheral devices.

Do not turn the computer or devices back on immediately. Wait a moment to let all capacitors fully discharge.

Standby Mode

If you do have to interrupt your work, you are able to turn off the power without exiting from your software by placing the computer into Standby Mode. In this mode data is maintained in the computer's main memory so that, when you turn on the power again, you can continue working right where you left off.

- *When the AC adaptor is connected, the computer will go into Standby Mode according to the settings in the TOSHIBA Power Saver.*
- *To restore the operation of the computer from Standby Mode, press the power button or press any key. Please be aware that this latter action only works on the internal keyboard if the Wake-up on Keyboard option is enabled within the HW Setup utility.*
- *If the computer enters Standby Mode while a network application is active, the application might not be restored when the computer is next switched on and the system returns from Standby Mode.*
- *To prevent the computer from automatically entering Standby Mode, disable Standby within the TOSHIBA Power Saver. However, please be aware that this configuration will nullify the computer's Energy Star compliance.*

- *Before entering Standby Mode, be sure to save your data.*
- *Do not install or remove a memory module while the computer is in Standby Mode. The computer or the module could be damaged.*
- *Do not remove the battery pack while the computer is in Standby Mode (unless the computer is connected to an AC power source). Data in memory will be lost.*
- *If you carry the computer on board an aircraft or into a hospital, be sure to shut down the computer in Hibernation Mode or in shutdown mode to avoid radio signal interference.*

Benefits of Standby Mode

The Standby Mode feature provides the following benefits:

- Restores the previous working environment more rapidly than does the Hibernation Mode feature.
- Saves power by shutting down the system when the computer receives no input or hardware access for the time period set by the System Standby feature.
- Allows the use of the panel power off feature.

Executing Standby Mode

You can also enable Standby Mode by pressing **Fn** + **F3** *- please refer to Chapter 5,* The Keyboard *for further details.*

You can enter Standby Mode in one of three ways:

1. Click **start**, click **Turn Off Computer** and then click **Stand By**.
2. Close the computer's LCD display panel. Please note that this feature must be enabled - please refer to the Setup Actions tab in the TOSHIBA Power Saver for further information (to access this utility, click **start** followed by **Control Panel** followed by **Performance and Maintenance** and then click the **TOSHIBA Power Saver** icon).
3. Press the power button. Please note that this feature must be enabled - please refer to the Setup Actions tab in the TOSHIBA Power Saver for further information (to access this utility, click **start** followed by **Control Panel** followed by **Performance and Maintenance** and then click the **TOSHIBA Power Saver** icon).

When you turn the power back on, you can continue where you left when you shut down the computer.

- *When the computer is switched off in Standby Mode, the power indicator will blink orange.*
- *If you are operating the computer on battery power, you can lengthen the overall operating time by switching it off into Hibernation Mode - Standby Mode will consume more power while the computer is off.*

Standby Mode limitations

Standby Mode will not function under the following conditions:

- Power is turned back on immediately after shutting down.
- Memory circuits are exposed to static electricity or electrical noise.

Hibernation Mode

The Hibernation Mode feature saves the contents of memory to the hard disk drive when the computer is turned off so that, the next time it is switched on, the previous state is restored. Please note that the Hibernation Mode feature does not save the status of any peripheral devices connected to the computer.

- *Save your data. While entering Hibernation Mode, the computer saves the contents of memory to the hard disk drive. However, for safety sake, it is best to save your data manually.*
- *Data will be lost if you remove the battery or disconnect the AC adaptor before the save is completed. Wait for the* **Hard Disk Drive** *indicator to go out.*
- *Do not install or remove a memory module while the computer is in Hibernation Mode. Data will be lost.*

Benefits of Hibernation Mode

The Hibernation Mode feature provides the following benefits:

- Saves data to the hard disk drive when the computer automatically shuts down because of a low battery condition.

For the computer to shut down into Hibernation Mode, this feature must be enabled in two places within the TOSHIBA Power Saver, (a) the Hibernate tab, (b) and the Setup Actions tab.

If you do not configure this feature, the computer will automatically shut down in Standby Mode. However, if battery power does become depleted, any data saved in Standby Mode will be lost.

- You can return to your previous working environment immediately when you turn on the computer.
- Saves power by shutting down the system when the computer receives no input or hardware access for the time period set by the System Hibernate feature.
- Allows the use of the panel power off feature.

Starting Hibernation Mode

You can also enable Hibernation Mode by pressing **Fn** + **F4** *- please refer to Chapter 5, The Keyboard for further details.*

To enter Hibernation Mode, follow the steps below.

1. Click **start**.
2. Select **Turn Off Computer**.
3. Open the **Turn Off Computer** dialog box.
4. Click **Hibernate**.

Automatic Hibernation Mode

The computer can be configured to enter Hibernation Mode automatically when you press the power button or close the lid. In order to define these settings, you can follow the steps as described below:

1. Click **start** and open the **Control Panel**.
2. Open **Performance and Maintenance** and open **Power Options**.
3. Select the **Hibernate** window in **`Power Options Properties`**, select the **Enable hibernation** check box and click the **Apply** button.
4. Open **TOSHIBA Power Saver**.
5. Select the **Setup Actions** window.
6. Enable the desired Hibernation settings for **When I press the power button** and **When I close the lid**.
7. Click the **OK** button.

Data save in Hibernation Mode

When you turn off the power in Hibernation Mode, the computer will take a moment to save the current data in memory to the hard disk drive. During this time, the **Hard Disk Drive** indicator will glow.

After you turn off the computer, and the content of memory has been saved to the hard disk drive, turn off the power to any peripheral devices.

Do not turn the computer or devices back on immediately. Wait a moment to let all capacitors fully discharge.

Restarting the computer

Certain conditions require that you reset the computer, for example if:

- You change certain computer settings.
- An error occurs and the computer does not respond to your keyboard commands.

If you need to restart the computer, there are three ways this can be achieved:

1. Click **start** followed by **Turn off computer** - from the **`Turn Off Computer`** menu select **Restart**.
2. Press **Ctrl** + **Alt** + **Del** to display the **`Windows Task Manager`**, then select **Shut Down** followed by **Restart**.
3. Press the power button and hold it down for five seconds. Once the computer has switched itself off, wait between ten and fifteen seconds before turning the power on again by pressing the power button.

Restoring the pre-installed software

If pre-installed files are damaged, use the Product Recovery Media to restore them. To restore the operating system and all pre-installed software, follow the steps below.

Restoring the Windows operating system

When you reinstall the Windows operating system, the hard disk drive will be reformatted and all data will be lost.

1. Load the Product Recovery Media in the optical disc drive and turn off the computer's power.
2. Hold down the **F12** key and turn on the power. When **Qosmio** appears, release the **F12** key.
3. Use the left or right cursor key to select the optical disc drive icon in the **Boot Devices** menu. For details, refer to the *Boot Priority* section in Chapter 7, *HW Setup*.
4. Follow the on-screen instructions.
5. If your computer came with additional software installed, this software can not be recovered from the Product Recovery Media. Re-install these applications (e.g. Works Suite, DVD Player, Games, etc.) separately from other media.

Restoring TOSHIBA utilities and drivers

If Windows is working properly, individual drivers or applications can be separately restored. The TOSHIBA Tools & Utilities folder (C:\TOOLSCD) contains drivers and applications, which are included with your computer system. If your system drivers or applications have become damaged in some way, you can reinstall most of the components from this folder.

Create a copy of this folder to an external medium for more convenience.

Restoring QosmioPlayer

To restore QosmioPlayer, follow the steps below.

1. Load the QosmioPlayer Recovery CD in the optical disc drive and turn off the computer's power.
2. Hold down the **F12** key and turn on the power. When **Qosmio** appears, release the **F12** key.
3. Use the left or right cursor key to select the optical disc drive icon in the **Boot Devices** menu. For details, refer to the *Boot Priority* section in Chapter 7, *HW Setup*.
4. Follow the on-screen instructions.

Your computer may be configured with either one or two hard disk drives. When you have two hard disk drives installed, data will be recovered onto built-in HDD1 regardless of the HDD Priority setting.

Chapter 4

Operating Basics

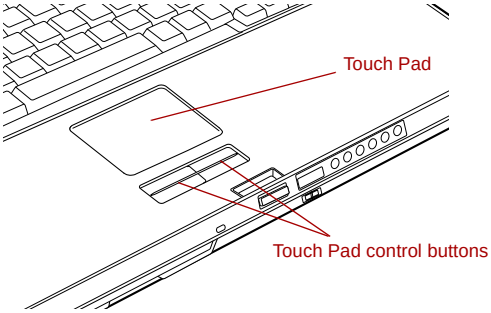
This chapter describes the basic operations of your computer, highlights the precautions that should be taken when using it, and details the considerations that should be made when handling CD/DVD and HD DVD media.

Using the Touch Pad

This computer is equipped with the following Touch Pad.

- The Touch Pad of only a touch pad function.

The Touch Pad can be used to move the on-screen pointer by touching the pad with a fingertip and moving the finger along the pad.



Touch Pad and Touch Pad control buttons

Pointing Mode Operation

To use the Touch Pad in Pointing Mode, simply touch it with a fingertip and move the finger along the pad in the direction you want the on-screen pointer to move.

The two buttons below the Touch Pad are used like the buttons on a mouse. Press the left button to select a menu item or to manipulate text or graphics with the pointer. Press the right button to display a context menu or operate another function according to the software you are using.

You can also tap the Touch Pad to perform functions similar to those of the left button on a standard mouse.

Click: Tap once

Double-click: Tap twice

Drag and drop: Tap to select the item(s) you want to move, leave your finger on the Touch Pad after the second tap and then move the item(s) to their new destination.

Using optical disc drives

The text and illustrations in this section refer to the optical disc drive which is a full-size device that provides high-performance execution of CD or DVD based information from either 12cm (4.72") media without the need to use an adaptor. The drive uses an ATAPI interface controller for CD and DVD operation and has an indicator at its front which will glow in conjunction with an indicator on the front of the computer to indicate that it is in use.

- *You should use the supplied WinDVD application in order to view DVD Video media.*
- *An 8cm CD/DVD can be used with the external optical disc drive.*

If you have a DVD Super Multi drive, please also refer to the *Writing CD/DVDs on DVD Super Multi drive* section for precautions on writing to CD's and DVD's.

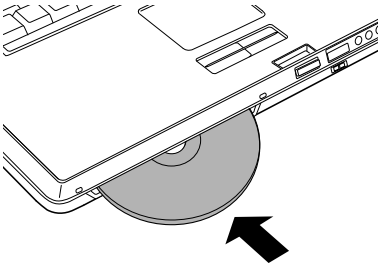
Loading discs

To load CD/DVD's, follow the steps as detailed below:

1. Turn your computer on.

2. Gently hold the CD/DVD by the edges with its labeled facing up, and insert it into the optical disc drive slot straight on slowly.

Gently push the CD/DVD until it is loaded automatically. Do not push it forcibly or at an angle to the optical disc drive slot. This may cause damage or adhesion of foreign matter on the surface of the CD/DVD. These imperfections may prevent the drive from reading from or writing to it.



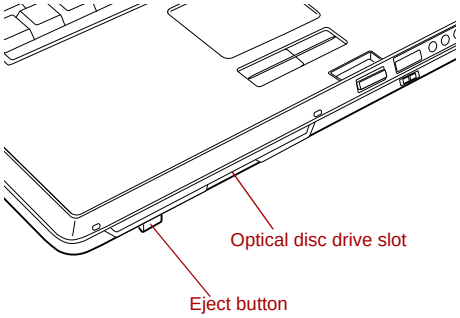
Inserting a CD/DVD

Removing discs

To remove the CD/DVD's, follow the steps as detailed below:

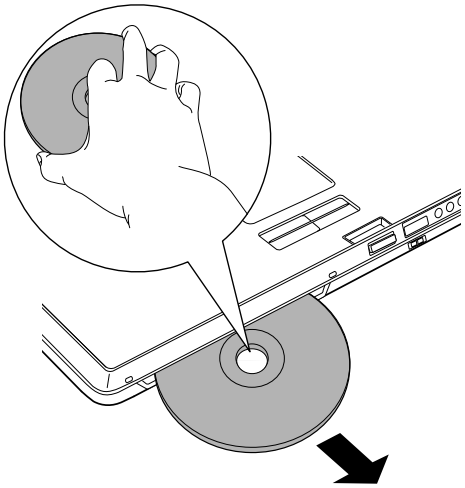
1. Check that your computer is on.
   If not, power your computer on.
2. Press the Eject button. The CD/DVD will be ejected about halfway.

Do not place your hand or another object near the optical disc drive slot.



Pressing the eject button

3. Gently hold the CD/DVD by the edges and pull it horizontally.



Removing a CD/DVD

Writing CD/DVDs on DVD Super Multi drives

You can use the DVD Super Multi drive to write data to either CD-R, CD-RW, DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer), DVD+RW or DVD-RAM discs. This computer is provided with TOSHIBA Disc Creator and TOSHIBA Direct Disc Writer, and InterVideo's WinDVD Creator Platinum to allow for the writing to CD and DVD media.

- *Please refer to the Writable discs, Chapter 2 for details about the types of writable CD and DVD discs that can be supported by this computer.*
- *Do not turn off the power to the optical disc drive while the computer is accessing it as this may cause you to lose data.*
- *CD-R/RW media cannot be accessed using the* **Create CD/DVD** *option in Media Center.*
- *To write data to CD-R/-RW media, use the* **TOSHIBA Disc Creator** *feature that is installed on your computer.*

When writing information to media using an optical drive, you should always ensure that you connect the AC adaptor to a live power socket. It is possible that, if data is written while powered by the battery pack, the write process may sometimes fail due to low battery power - in these instances data loss may occur.

Important message

Before you write or rewrite to any of the media supported by the DVD Super Multi Drive, please read and follow all of the setup and operating instructions in this section. If you fail to do so, you may find that the DVD Super Multi drive may not function properly, and you may fail to write or rewrite information successfully - this may cause you to either lose data or incur other damage to the drive or media.

Legal Footnotes

TOSHIBA does not bear responsibility for the following:

- Damage to any CD-R, CD-RW, DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer), DVD+RW or DVD-RAM disc that may be caused by writing or rewriting with this product.
- Any change or loss of the recorded contents of CD-R, CD-RW, DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer), DVD+RW or DVD-RAM media that may be caused by writing or rewriting with this product, or for any business profit loss or business interruption that may be caused by the change or loss of the recorded contents.
- Damage that may be caused by using third party equipment or software.

Given the technological limitations of current optical disc writing drives, you may experience unexpected writing or rewriting errors due to disc quality or problems with hardware devices. In view of this, it is good practice to make two or more copies of important data, in case of any undesired change or loss of the recorded contents.

Before writing or rewriting

- Based on TOSHIBA's limited compatibility testing, we suggest the following manufacturers of CD-R, CD-RW, DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer), DVD+RW or DVD-RAM media, however, it must be noted that disc quality can affect write or rewrite success rates. Please also be aware that in no event does TOSHIBA guarantee the operation, quality or performance of any disc.

CD-R:

TAIYO YUDEN CO., LTD.
MITSUBISHI CHEMICAL CORPORATION
RICOH Co., Ltd.

CD-RW: (Multi-Speed and High-Speed)

MITSUBISHI CHEMICAL CORPORATION
RICOH Co., Ltd.

CD-RW: (Ultra-Speed)

MITSUBISHI CHEMICAL CORPORATION

DVD-R:

DVD Specifications for Recordable Disc for General Version 2.0
TAIYO YUDEN CO., LTD.
Matsushita Electric Industrial Co., Ltd

DVD-R (Dual Layer):

MITSUBISHI CHEMICAL CORPORATION

DVD+R:

MITSUBISHI CHEMICAL CORPORATION
RICOH Co., Ltd.

DVD+R (Double Layer): (Double Layer Recordable drive only)

MITSUBISHI CHEMICAL CORPORATION

DVD-RW:

DVD Specifications for Recordable Disc for Version 1.1 or version 1.2

VICTOR COMPANY OF JAPAN.LIMITED

MITSUBISHI CHEMICAL CORPORATION

DVD+RW:

MITSUBISHI CHEMICAL CORPORATION
RICOH Co., Ltd.

DVD-RAM: (DVD Super Multi drive only)

DVD Specifications for DVD-RAM Disc for Version 2.0, Version 2.1 or Version 2.2
Matsushita Electric Industrial Co., Ltd.
Hitachi Maxell Ltd.

- *This drive cannot use discs that allow writing faster than 8x speed (DVD-R and DVD+R media), 4x speed (DVD-RW and DVD+RW media), 5x speed (DVD-RAM media), 2x speed (DVD-R (Dual Layer) media) and 2.4x speed (DVD+R (Double Layer media).*
- *Some types and formats of DVD-R (Dual Layer) and DVD+R (Double Layer) discs may be unreadable.*
- *2.6GB and 5.2GB DVD-RAM media cannot be read from or written to.*
- *DISC created in DVD-R (Dual Layer) format4 (Layer Jump Recording) cannot be read.*

- If the disc is poor in quality, or is dirty or damaged, writing or rewriting errors may be noted - ensure that you check all discs for dirt or damage before you use them.
- The actual number of rewrites to CD-RW, DVD-RW, DVD+RW or DVD-RAM media will be affected by the quality of the disc itself and the way in which it is used.

- There are two types of DVD-R media available, authoring discs and general use discs. Do not attempt to use authoring discs as only general use discs can be written to by a computer drive.
- You can use both DVD-RAM discs that can be removed from a cartridge and DVD-RAM discs designed without a cartridge.
- You may find that other computer DVD-ROM drives or other DVD players may not be able to read DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer) or DVD+RW discs.
- Data written to a CD-R, DVD-R, DVD-R (Dual Layer), DVD+R or DVD+R (Double Layer) discs cannot be deleted either in whole or in part.
- Data deleted/erased from a CD-RW, DVD-RW, DVD+RW or DVD-RAM disc cannot be recovered. You must check the content of the disc carefully before you delete it, taking care that, if multiple drives that can write data to discs are connected, you do not delete data from the wrong one.
- In writing to DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer), DVD+RW or DVD-RAM media, some space is required for file management, so you may not be able to write to the full capacity of the disc.
- Since the disc is based on the DVD standard, it might be filled with dummy data if the written data is less than about 1GB. Therefore, in these circumstance, even if you write only a small amount of data, it might take additional time to fill in the dummy data.
- DVD-RAM media formatted to the FAT-32 standard cannot be read in Windows 2000 without specific DVD-RAM Driver software.
- When multiple drives that can write data to discs are connected, be sure that you do not write to or delete data from the wrong drive.
- Be sure to connect the AC adaptor to the computer before you write or rewrite any information.
- Before you enter either Standby Mode or Hibernation Mode, take care to ensure that any DVD-RAM writing has been completed. In this instance, writing is finished if you can eject the DVD-RAM media.
- Be sure to close all other software programs except for the writing software itself.
- Do not run software such as a screen saver which can put a heavy load on the processor.
- Operate the computer at its full power settings - do not use any power-saving features.
- Do not write information while virus checking software is running, instead wait for it to finish, then disable the virus protection applications, including any software that checks files automatically in the background.
- Do not use any hard disk utilities, including those that are intended to enhance hard disk drive access speeds, as they may cause unstable operation and damage data.

- CD-RW (Ultra Speed +) media should not be used as data may be lost or damaged.
- You should always write from the computer's hard disk drive onto the CD/DVD - do not try to write from shared devices such as a server or any other network device.
- Writing with software other than TOSHIBA Disc Creator and InterVideo WinDVD Creator Platinum has not been confirmed, therefore operation with other software applications cannot be guaranteed.

When writing or rewriting

Please observe the following points while you write or rewrite data to CD-R, CD-RW, DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer), DVD+RW or DVD-RAM media:

- Always copy data from the hard disk drive to the optical media - do not use the cut-and-paste function as the original data will be lost if there is a write error.
- Do not perform any of the following actions:
  - Change users in the Windows XP operating system.
  - Operate the computer for any other function, including such tasks as using a mouse or Touch Pad, or closing/opening the LCD display panel.
  - Start a communication application such as a modem.
  - Apply impact or vibration to the computer.
  - Install, remove or connect external devices, including such items as a PC Card, SD Card, ExpressCard, Memory Stick/Memory Stick Pro, xD picture card, MultiMediaCard, USB device, external monitor, i.LINK device, or an optical digital device.
  - Use the audio/video control button to reproduce music or voice.
  - Open the optical disc drive.
- Do not use shut down, log off, Standby Mode or Hibernation Mode functions while writing or rewriting.
- Make sure that the write/rewrite operation is completed before going into either Standby Mode or Hibernation Mode (writing is completed if you can remove an optical media on the DVD Super Multi drive).
- If the media is of poor quality, or is dirty or damaged, writing or rewriting errors may occur.
- Set the computer on a level surface and avoid places subject to vibration such as airplanes, trains or cars. In addition, do not use the computer on an unstable surface such as a stand.
- Keep mobile phones and other wireless communication devices away from the computer.

TOSHIBA Disc Creator

Please be aware of the following limitations when you use the TOSHIBA Disc Creator:

- DVD Video cannot be created using TOSHIBA Disc Creator.
- DVD Audio cannot be created using TOSHIBA Disc Creator.
- You cannot use TOSHIBA Disc Creator's "Audio CD for Car or Home CD Player" function to record music to DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer) or DVD+RW media.
- Do not use the "Disc Backup" function of TOSHIBA Disc Creator in order to copy DVD Video or DVD-ROM material that has copyright protection.
- DVD-RAM discs cannot be backed up using the "Disc Backup" function of TOSHIBA Disc Creator.
- You cannot back up CD-ROM, CD-R or CD-RW media to DVD-R, DVD-R (Dual Layer) or DVD-RW media using the "Disc Backup" function of TOSHIBA Disc Creator.
- You cannot back up CD-ROM, CD-R or CD-RW media to DVD+R, DVD+R (Double Layer) or DVD+RW media using the "Disc Backup" function of TOSHIBA Disc Creator.
- You cannot back up DVD-ROM, DVD Video, DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer) or DVD+RW to CD-R or CD-RW media using the "Disc Backup" function of TOSHIBA Disc Creator.
- TOSHIBA Disc Creator cannot record in packet format.
- You might not be able to use the "Disc Backup" function of TOSHIBA Disc Creator to back up a DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer) or DVD+RW disc that was made with other software on a different optical media recorder.
- If you add data to a DVD-R, DVD-R (Dual Layer), DVD+R or DVD+R (Double Layer) disc that you have already recorded to, you might not be able to read the added data under some circumstances. For example, it cannot be read under 16-bit operating systems, such as Windows 98SE and Windows Me, while in Windows NT4 you will need Service Pack 6 or later, and in Windows 2000, you will need Service Pack 2. In addition to this, some DVD-ROM and DVD-ROM / CD-R/RW drives cannot read this added data regardless of the operating system.
- TOSHIBA Disc Creator does not support recording to DVD-RAM discs - to achieve this you should use Windows Explorer or another similar utility.
- When you back up a DVD disc, be sure that the source drive supports recording to DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer) or DVD+RW media - if this is not the case then the source disc might not be backed up correctly.
- When you back up a DVD-R, DVD-R (Dual Layer), DVD-RW, DVD+R, DVD+R (Double Layer) or DVD+RW disc, be sure to use the same type of disc.

- You cannot partially delete any data written to a CD-RW, DVD-RW or DVD+RW disc.

Data Verification

To verify that data has been written or rewritten correctly to a data CD/DVD you should follow the steps below before you begin the write/rewrite process:

1. Display the setting dialog box by one of the following two steps:
   - Click the setting button ( ) for writing on the main toolbar in the **Data CD/DVD** mode.
   - Select **Setting for writing** -> **Data CD/DVD** in the **Setting** menu.
2. Mark the **Verify written data** check box.
3. Select **File Open** or **Full Compare** mode.
4. Click the **OK** button.

TOSHIBA Direct Disc Writer

Note the following limitations when you use TOSHIBA Direct Disc Writer:

- This software supports only rewritable discs (DVD+RW, DVD-RW, and CD-RW). It does not support DVD+R, DVD-R, and CD-R discs that are not rewritable.
- TOSHIBA Direct Disc Writer does not support formatting a DVD-RAM disc and writing to it, this function is performed by DVD-RAM Driver Software. You can run “DVDForm” by clicking the Start button and then selecting “All Programs”, “DVD-RAM”, “DVD-RAM Driver” and “DVDForm” sequentially.
- Do not use any discs that have been formatted with packet writing software other than TOSHIBA Direct Disc Writer. Similarly, do not use any discs that have been formatted with TOSHIBA Direct Disc Writer with any packet writing software other than TOSHIBA Direct Disc Writer. When using a disc you are not familiar with, format it by selecting “Full Format” before using it.
- Do not use the cut-and-paste function for files and folders. A file or folder that has been cut may be lost if writing fails due to an error on the disc.
- When writing SETUP files for an application to a disc formatted by TOSHIBA Direct Disc Writer, and then attempting to start SETUP from this disc, an error may occur. In this case, please copy the SETUP files to the hard disk drive and then run them from there.

Video

As for InterVideo WinDVD Creator Platinum. Only the model that can be written in to DVD is attached.

When using WinDVD Creator Platinum

You can record video back to a digital camcorder via the i.LINK (IEEE1394) connector using the WinDVD Creator Platinum application, however, in some instances you may notice that the sound appears choppy. If this issue is noted then please follow the instructions below:

1. Click **start** followed by **Control Panel**.
2. Click the **Performance and Maintenance** icon in the Control Panel.
3. Click the **System** icon in the Performance and Maintenance window.
4. Click the **Advanced** tab in the System Properties window.
5. Click the **Settings** icon in the Performance section.
6. Click the **Advanced** tab in the Performance Options window.
7. Click the **Change** icon in the Virtual Memory section.
8. Select the **Custom size** button in the Virtual Memory window.
9. Specify a higher values for the Initial Size and Maximum Size options.
10. Click the **Set** button in the Virtual Memory window.
11. Click the **OK** button in the Virtual Memory window.

How to make a DVD-Video

The following process details the simplified steps for making a DVD Video disc from video data captured from a DV-camcorder:

1. Click **start** followed by **All Programs** followed by **InterVideo WinDVD Creator2** and then click **InterVideo WinDVD Creator** to launch the WinDVD Creator application.
2. Click the **Capture** button and then capture the video data from the DV-camcorder via the i-Link (IEEE1394) connection.
3. Click the **Edit** button and then drag the video clips from the **Video Library** tab to the edit track.
4. Click the **Make Movie** button in the top bar.
5. Double-click the right arrow button icon at the center of the right hand side.
6. Put a blank DVD-R or DVD+R disc or an erased DVD-RW or DVD+RW disc in the optical disc drive.
7. Click **Start** to record to the disc.
8. When recording is finished, the optical disc tray opens or the disc will be ejected.

How to learn more about InterVideo WinDVD Creator

For further information on the InterVideo WinDVD Creator software, please refer to the on-line Help File that is supplied with it.

Important information for use

Please be aware of the following limitations when you write to a DVD Video:

1. Editing digital video
   - Log in with Administrator rights in order to use the WinDVD Creator software.
   - Make sure that your computer is running on AC power when using the WinDVD Creator software.
   - Operate the computer at its full power settings - do not use any power-saving features.
   - While you are editing a DVD Video you are able to display previews, however, if another application is running, the preview might not be shown properly.
   - The WinDVD Creator software cannot show video on the external monitor when the computer is running in Simultaneous Mode.
   - The WinDVD Creator software cannot edit or play copy protected content.
   - Do not change any display settings while using the WinDVD Creator software.
   - Do not enter either Standby Mode or Hibernation Mode while using the WinDVD Creator software.
   - Do not operate the WinDVD Creator software immediately after turning on the computer - please wait until all disk has stopped.
   - To ensure that you capture all of your data when recording to a DV-camcorder, let the camcorder record for a few seconds before you begin the actual data record phase.
   - CD recorder, JPEG functions, DVD Audio, mini DVD and Video CD functions are not supported in this version of the software.
   - While recording video to DVD or tape, please close all other programs.
   - Do not run software such as a screen saver which can put a heavy load on the processor.
   - Do not run any communication applications like a modem or a LAN.
2. Before recording the video to DVD media
   - When you record to DVD discs you should only use media recommended by TOSHIBA.
   - Do not set the working drive to a slow device, such as a USB 1.1 hard disk drive, or it will fail to create the DVD.

- Do not perform any of the following actions:
  - Operate the computer for any other function, including such tasks as using a mouse or Touch Pad, or closing/opening the LCD display panel.
  - Apply impact or vibration to the computer.
  - Install, remove or connect external devices, including such items as a PC Card, SD Card, ExpressCard, Memory Stick/Memory Stick Pro, xD picture card, MultiMediaCard, USB device, external monitor, i.LINK device, or an optical digital device.
  - Use the audio/video control button to reproduce music or voice.
  - Open the optical disc drive.
- Please verify your disc after recording important data.
- DVD-R, DVD+R and DVD-RW discs cannot be written to in VR format.
- The WinDVD Creator software cannot export to DVD Audio, Video CD or mini DVD formats.
- The WinDVD Creator software can write DVD-RAM and DVD+RW discs in VR format, but the disc may only play on your computer.
- When writing to a DVD disc, the WinDVD Creator software requires 2GB or more of disk space for every one hour of video.
- When you make a fully recorded DVD, the chapter sequence may not play correctly.

3. About Disc Manager
   - The WinDVD Creator software can edit one play list on a disc.
   - The WinDVD Creator software might show a different thumbnail than you previously set in a standard DVD-RAM recorder.
   - Using the Disc Manager, you can edit DVD-VR formats on DVD-RAM media, DVD+VR format on DVD+RW media and DVD Video format on DVD-RW media.
4. About recorded DVD's
   - Some DVD-ROM drives that are provided with personal computers, or other types of DVD players may not be able to read DVD-R, DVD+R, DVD-R (Dual Layer), DVD+R (Double Layer), DVD-RW, DVD+RW or DVD-RAM discs.
   - When playing your recorded disc on your computer, please use the WinDVD software application.
   - If you use an over-used rewritable disc you may find that the option for full formatting might be locked - in these instances please use a brand new disc.

Using HD DVD-ROM drives

This section describes the features and use of HD DVD-ROM drive.

Please refer to the included Qosmio HD DVD Guide for more information on using the HD DVD-ROM drives.

This computer is equipped with a full-size HD DVD-ROM drive module that lets you record data to rewritable CD/DVDs as well as run 12cm (4.72") CD/DVD/HD DVDs and 8cm (3.15") CD/DVDs without using an adaptor.

You should use the HD DVD playback software in order to view HD DVD Video media.

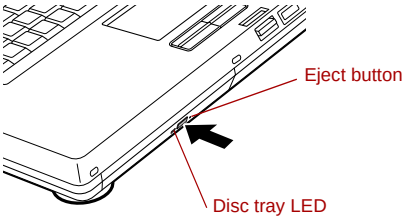
If you have a HD DVD-ROM drive, please also refer to the *Writing CD/DVDs on DVD Super Multi drives* section for precautions on writing to CD's and DVD's.

If you have a HD DVD-ROM drive, please refer to the Qosmio HD DVD Guide for playback to HD DVD.

Loading discs

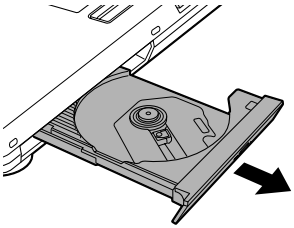
To load CD/DVD's, follow the steps as listed below and refer to figures 4-8 to 4-10.

1. When the computer's power is on, press the eject button to open the disc tray slightly.



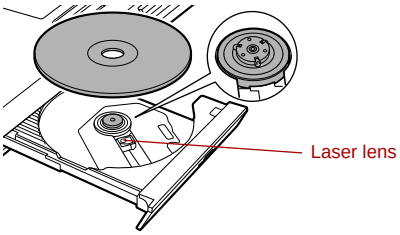
Pressing the eject button

2. Grasp the disc tray gently and pull until it is fully opened.



Pulling the disc tray open

3. Lay the CD/DVD/HD DVD, label side up, in the disc tray.



Inserting a CD/DVD/HD DVD

When the disc tray is fully opened, the edge of the computer will extend slightly over the area where you insert the media. Therefore, when loading a CD, DVD, or HD DVD you will need to turn it slightly at an angle when you place it in the disc tray. After loading the CD/DVD/HD DVD you should ensure that it is properly positioned over the central spindle and that it lies flat within the tray.

- *Do not touch either the laser lens or the area immediately around it - doing so could cause misalignment and may damage the drive.*
- *You should ensure that all foreign objects are prevented from entering the drive. In doing this you should check the surface of the disc tray, especially the area behind its front edge, to ensure there is nothing present before closing the drive.*

4. Press gently at the center of the CD/DVD/HD DVD until you feel it click into place on the central spindle - the disc should now lie slightly below the top of the spindle, flush with its base.
5. Press the center of the disc tray in order to close it - the tray will click into place when it is locked.

If the CD/DVD/HD DVD is not seated properly when the disc tray is closed, you may find that the media itself might become damaged, and/or the disc tray might not open fully when you next press the eject button.

Removing discs

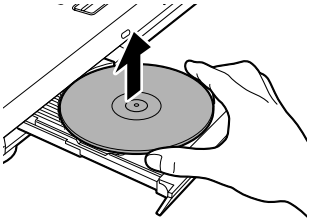
To remove CD/DVD/HD DVD's, follow the steps as listed below.

Do not press the eject button while the computer is accessing the media in the drive, instead wait for the indicator to go out before you open the disc tray. In addition, if the CD/DVD media is spinning when you open the tray, wait for it to fully stop before you remove it.

1. When the computer's power is on, press the eject button to open the disc tray slightly and then gently pull it out of the system until it is fully opened.

After the disc tray has opened slightly, you should wait for a moment to ensure the CD/DVD media has stopped spinning before you fully open the tray.

2. The CD/DVD/HD DVD media will extend slightly over the sides of the disc tray in order that you can hold it. Grasp it carefully by its edges and lift it vertically off of the central spindle and out of the tray.

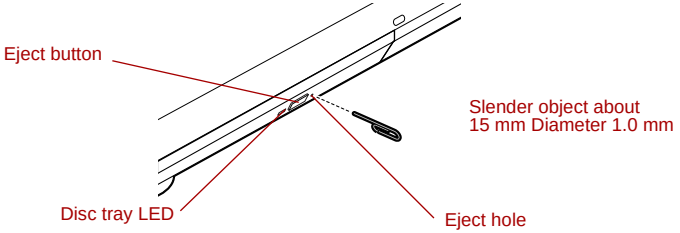


Removing a CD/DVD/HD DVD

3. Press the center of the disc tray in order to close it - the tray will click into place when it is locked.

How to remove a CD/DVD/HD DVD when the disc tray will not open

Pressing the eject button will not open the disc tray when the computer is switched off, although in these circumstances, you can open the tray by inserting a slender object such as a straightened paper clip about 15mm into the eject hole just to the right of the drive's eject button.



Manual release with the eject hole

You must ensure that you turn off the power before you use the eject hole. If the CD/DVD/HD DVD media is spinning when you open the disc tray, it may fly off of the spindle and cause injury.

HD DVD

This section describes the features and use of HD DVD.

Please refer to the included Qosmio HD DVD Guide for more information on the HD DVD.

Summary

HD DVD refers to next-generation of HD (high vision) capable high definition DVD discs approved by the “DVD Forum”, the worldwide DVD standards organization in which over 230 companies from all over the world participate. There are two types of read-only HD DVD-ROM (single-sided); single-sided dual-layer 30GB (Gigabyte) and single-sided single-layer 15GB. A single full-length, high definition movie can be stored on a single HD DVD disc.

HD DVD Media

- Like CD and DVD, HD DVD is divided into the read-only and recordable formats listed below.
- Some media cannot be used with this product. Be sure to thoroughly read section the HD DVD-ROM drive, Chapter 2, before using this product.
- HD DVD-Video: For video playback. Used to store movies and other video.
- HD DVD-ROM: Read-only media.
- HD DVD-R: A recordable media which can be written to only once.
- HD DVD-RW: A recordable media intended for AV applications, which can be written to and erased repeatedly.
- HD DVD-RAM: A recordable media intended for PC applications, which can be written to and erased repeatedly.

Media Structures and Capacity

Recordable Surface	Recordable Layer Structure	Capacity
Single-sided Single-Layer	HD DVD Recordable Layer Only	15GB
Single-sided Dual-Layer	HD DVD Recordable Layer Only	30GB
Double-sided Single-Layer	HD DVD Recordable Layer Only	30GB
Double-sided Dual-Layer	HD DVD Recordable Layer Only	60GB

- HD DVD (Twin format disc): Has both HD DVD and DVD recordable layers.

Media Structures and Capacity

Recordable Surface	Recordable Layer Structure	Capacity
Single-sided Dual-Layer	HD DVD Recordable Layer	15GB
	DVD Recordable Layer	4.7GB

Media care

This section provides tips on protecting data stored on your CD's, DVD's, HD DVD's and floppy disks. Handle your media with care. Following the simple precautions listed below will increase the lifetime of your media and protect the data stored on it.

CD/DVDs/HD DVD's

1. Store your CD's, DVD's or HD DVD's in the containers they originally came in to protect them and keep them clean.
2. Do not bend the CD's, DVD's or HD DVD's.
3. Do not write on, apply a sticker to, or otherwise mar the surface of the CD's, DVD's or HD DVD's that contains the data.
4. Hold the CD's, DVD's or HD DVD's by its outside edge or the edge on the center hole - any fingerprints on the surface of the disc can prevent the drive from properly reading data.
5. Do not expose the CD's, DVD's or HD DVD's to direct sunlight, extreme heat or cold.
6. Do not place heavy objects on your CD's, DVD's or HD DVD's.
7. If your CD's, DVD's or HD DVD's become dusty or dirty, wipe them with a clean dry cloth from the center hole outwards - do not wipe in a circular direction. If necessary, you can use a cloth that has been lightly dampened in water or a neutral cleaner but you must not use benzine, thinner or any similar cleaning solution.

Floppy disks

The USB floppy disk drive is available only as an option.

1. Store your floppy disk in the container they came in to protect them and keep them clean. If a floppy disk becomes dirty, clean it with a soft, lightly dampened cloth - do not use cleaning fluid.
2. Never open the shutter or touch the magnetic surface of your floppy disk - doing this could permanently damage it and lose data.
3. Always handle floppy disk with care to prevent the loss of stored data.
4. Always apply the floppy disk label in the correct location and never apply a new label on top of an existing one - in this instance the label could come loose and damage the floppy drive.

5. Never use a pencil for writing on a floppy disk label as the dust from the pencil lead could cause a system malfunction if it found its way onto the computer's components. In this instance, always use a felt-tipped pen and write the label first before applying it to the floppy disk.
6. Never put a floppy disk in a location where water or other liquid may make contact with it, or where it is excessively damp - either of these conditions could cause data loss.
7. Never use a wet or damp floppy disk - this could damage the floppy disk drive or other devices within the computer.
8. Data may be lost if the floppy disk is twisted, bent, or exposed to direct sunlight, extreme heat or cold.
9. Do not place heavy objects on your floppy disk.
10. Do not eat, smoke, or use items such as erasers near your floppy disk as foreign particles inside the jacket of the floppy disk can damage the magnetic surface.
11. Magnetic energy can destroy the data on your floppy disk. In view of this you should keep your floppy disk away from speakers, radios, televisions and other sources of magnetic fields.

TV Tuner

Use the My TV feature of Media Center in Windows mode to watch TV programs or record them.

According to the government regulations, it is not permitted to bring PAL/SECAM TV tuners into Korea.

Using the TV Tuner

Antenna

- The quality of sounds and pictures greatly depends on the radio propagation conditions.
- When you use your computer in areas where the radio waves are weak, which results in poor radio receiving conditions, contact the dealer you purchased it from, or use a commercially available antenna booster. Please refer to the manual provided with the booster for details.

Connecting the Cable

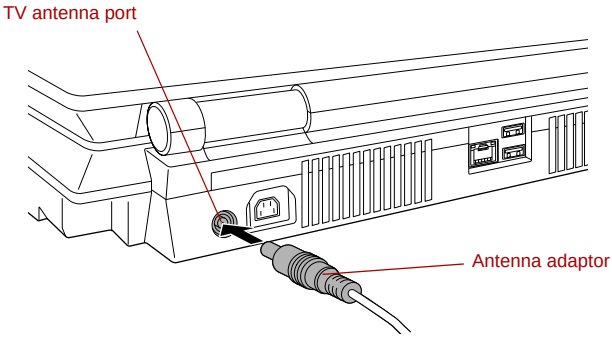
Use the antenna adaptor that comes with the product to connect the antenna to your computer.

Connecting the antenna adaptor

When lightning occurs, do not touch the antenna line. This may cause an electric shock.

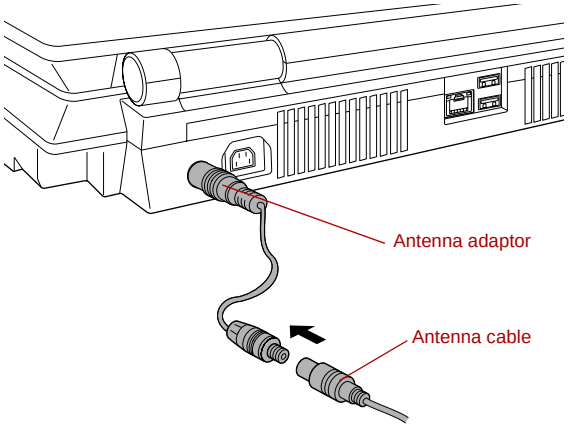
If you have to operate your computer during a thunderstorm and are connecting the TV tuner to an outside antenna, you should operate your computer using AC power mode. The AC adaptor offers some protection against (but does not entirely prevent) possible electric shock caused by lightning. For complete protection, do not operate your computer during a thunderstorm.

1. Save data, shutdown Windows and turn off the power.
2. Connect the antenna adaptor to the TV antenna port of your computer.



Connecting the antenna adaptor

3. Connect the antenna cable to the other end of the antenna adaptor.



Connecting the antenna cable

When you have been using a descrambler to receive the programs on cable TV or satellite broadcasting, connect the descrambler to the antenna cable.

Sound system

This section describes some of the audio control functions, including sound levels and power management.

Volume Control

The Volume Control utility lets you control the audio volume under Windows for both playback and recording.

- To launch the Volume Control for Playback utility, click **start** followed by **All Programs** followed by **Accessories** followed by **Entertainment** and then click **Volume Control**.
- To launch the Recording Control utility, click **Options** followed by **Properties**, choose **Recording** and then click **OK**.
- To view details of the volume control utility, click **Help**.

Microphone level

In order to change the microphone gain level, follow the steps as detailed below.

1. Click **start** followed by **All Programs** followed by **Accessories** followed by **Entertainment** and then click **Volume Control**.
2. Click **Options** and then point to Properties.
3. Select **Recording** and then click **OK**.
4. Click **Options** and then select **Advanced Controls**.
5. Click **Advanced**.
6. Select the **Microphone Boost** check box.

SigmaTel Control Panel

The SigmaTel Control Panel allows you to control some of the computer's audio settings. In order to launch this utility, follow the steps detailed below:

1. Click **start** followed by **Control Panel**.
2. If you are viewing the Control Panel application in Category View, click on **Switch to Classic View**.
3. Double click the **SigmaTel Audio** icon.

Volume control

To adjust the audio volume in Windows for both playback and recording, click the **Levels** tab.

In order to hear the audio input from a microphone or the analog sound from the line input connector you should first disable the **Mute** button within the **Input Monitor**.

Audio power management

The audio controller can effectively be switched off when the audio function is not being used in order to conserve power. To enable the audio power management function, follow the steps as detailed below:

1. Clicked the **Advanced** tab.
2. Select the **Enable Power Management** check box.
3. Input a time in the **Time to Power Saving State** setting.

Please note that, if the **Enable Power Management** *check box is not select, the audio controller will always be active.*

Graphic equalizer

You are able to adjust the graphic equalizer settings in order to enhance the overall sound quality.

Dolby® Home Theater

On the **Dolby** tab, you can adjust the Dolby Home Theater settings to enhance sound quality.

Dolby® Virtual Speaker is enabled as the default setting. It is recommended that you use this option when listening to audio from your computer's internal speaker. To listen to audio through your headphones or earphone, select **Headphones** in the Speaker Configuration drop-down menu. The Dolby® Headphone will then be enabled.

Dolby® Digital Live is disabled as the default setting. However, it is recommended that you enable this option when you listen to audio from external equipment like multi-channel speaker systems, or home theater systems, that are connected to the S/PDIF jack of your computer through a digital optical cable. To enable Dolby Digital Live, select the **Enable Dolby Digital Live Support** check box.

For more details on using the Dolby Home Theater, open the Dolby dialog box and then click the **F1** key. This will display the Dolby Home Theater Help information.

Speaker configuration

On the **Speaker Test** tab, you can verify whether the sound is heard from a speaker on either side by clicking on the picture of a speaker.

Modem

This section describes how to connect and disconnect the internal modem to and from a telephone jack.

- *Connection to any communication line other than an analog phone line could cause a computer system failure.*
  - *Connect the built-in modem only to ordinary analog phone lines.*
  - *Never connect the built-in modem to a digital line (ISDN).*
  - *Never connect the built-in modem to the digital connector on a public telephone or to a digital private branch exchange (PBX).*
  - *Never connect the built-in modem to a key telephone system for residences or offices.*
- *Never operate your computer on AC power during a thunderstorm. If you see lightning or hear thunder, immediately turn off the computer. An electric surge caused by the storm, may result in a system failure, loss of data or hardware damage.*

Region selection

Telecommunication regulations vary from one region to another, so you will need to make sure the internal modem's settings are correct for the region in which it will be used.

The built-in modem can be used only in specified countries and regions. Using the modem in an area not specified for use may cause a system failure. Check the specified areas carefully before using it.

To select a region, follow the steps as detailed below:

1. Click **start** followed by **All Programs** followed by **TOSHIBA** followed by **Networking** and then click **Modem Region Select**.

If it is available, do not use the Country/Region Select function included as part of the modem setup utility within the Control Panel - if you change the country/region setting this way you may find that the change does not take effect.

2. The Region Selection icon will appear in the Windows Task Bar.
3. Click the icon with the primary (left) mouse button to display a list of regions that the modem supports, together with a sub-menu which details telephony location information - a check mark will appear next to the currently selected region and telephony location.
4. Select either a region from the region menu or a telephony location from the sub-menu.
   - When you click a region it becomes the modem's default selection for any new dialling locations that are created within the Windows Control Panel (Phone and Modem Options).
   - When you select a telephony location, the corresponding region is automatically selected and becomes the modem's default setting.

Properties menu

Click the icon with the secondary (right) mouse button in order to display a Properties menu on the screen.

Setting

Within the Properties menu you are able to either enable or disable the following settings:

AutoRun Mode

Allows you to configure whether the Modem Region Select utility starts automatically whenever you start up the operating system.

Open the Dialing Properties dialog box after selecting region.

Allows you to configure whether the dialing properties dialog box will be displayed automatically after you have selected a region.

Location list for region selection.

Displays a sub-menu which details location information.

Open dialog box, if the modem and Telephony Current Location region code do not match.

Displays a warning if the current settings for both region code and telephony location are different.

Modem Selection

If the computer cannot recognize the internal modem, a dialog box is displayed from which you should select the appropriate communications port for your modem to use.

Dialing Properties

You should select this item in order to display the dialing properties.

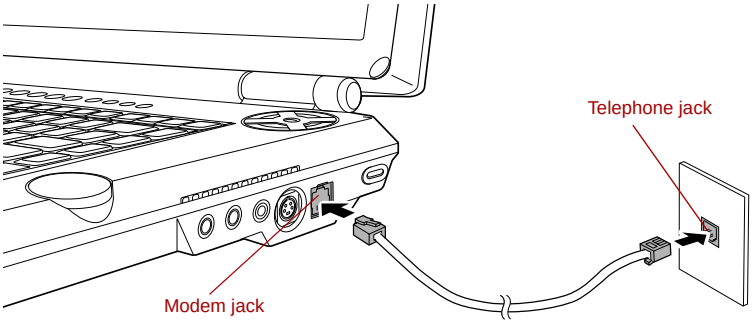
If you are using the computer in Japan, the Telecommunications Business Law requires that you select Japan region mode. It is illegal to use the modem in Japan with any other selection.

Connecting the modular cable

To connect the modem's modular cable, follow the steps as detailed below:

- *Connection to any communication line other than an analog phone line could cause a computer system failure.*
  - *Connect the built-in modem only to ordinary analog phone lines.*
  - *Never connect the built-in modem to a digital line (ISDN).*
  - *Never connect the built-in modem to the digital connector on a public telephone or to a digital private branch exchange (PBX).*
  - *Never connect the built-in modem to a key telephone system for residences or offices.*
- *Never operate your computer on AC power during a thunderstorm. If you see lightning or hear thunder, immediately turn off the computer. An electric surge caused by the storm, may result in a system failure, loss of data or hardware damage.*

1. Plug the end of the modular cable into the computer's modem jack.
2. Plug the other end of the modular cable into a telephone jack.



Connecting the internal modem

Do not pull on the cable or move the computer while the cable is connected.

If you use a storage device such as an optical drive or hard disk drive connected to a 16-bit PC Card, you might experience the following problems with the operation of the modem:

- *The modem speed is slow or communication is periodically interrupted.*
- *Skips or jumps may be noted in sound.*

Disconnecting the modular cable

To disconnect the modular cable, follow the steps as detailed below:

1. Pinch the lever on the plug in the telephone jack and pull it out from within the connector.
2. Pinch the lever on the plug in the computer's modem jack and pull it out from within the computer.

Wireless communications

The computer's wireless communication function supports both Wireless LAN and Bluetooth devices.

All models are provided with Wireless Communication switch. Some models are equipped with both Wireless LAN and Bluetooth functions.

Wireless LAN

The Wireless LAN is compatible with other LAN systems based on Direct Sequence Spread Spectrum/Orthogonal Frequency Division Multiplexing radio technology that complies with IEEE802.11 Wireless LAN standard (Revision A, B or G).

Do not install or remove an optional memory module while Wake-up on Wireless LAN is enabled.

- *The Wake-up on Wireless LAN function consumes power even when the system is off. Leave the AC adaptor connected while using this feature.*
- *The Wake-up on Wireless LAN function is effective only when it is connected with an Access Point. This function becomes invalid when the connection is broken.*

- Theoretical maximum speed of 54Mbps for IEEE 802.11a or 802.11g
- Theoretical maximum speed of 11Mbps for IEEE 802.11b
- Frequency Channel Selection of 5GHz for IEEE 802.11a or 2.4GHz for 802.11b/g
- Roaming over multiple channels
- Card power management
- Wired Equivalent Privacy (WEP) data encryption, based on the 128 bit encryption algorithm
- Wi-Fi Protected Access (WPA) support
- Advanced Encryption Standard (AES) data encryption
- Wake-up on Wireless LAN

- *The values shown above are the theoretical maximums for Wireless LAN standards. The actual values may differ.*
- *The transmission speed over the wireless LAN, and the distance over which the wireless LAN can reach, may vary depending on surrounding electromagnetic environment, obstacles, access point design and configuration, client design and software/hardware configurations. The transmission rate described is the theoretical maximum speed as specified under the appropriate standard - the actual transmission speed will be lower than the theoretical maximum speed.*

Setting

1. Please make sure that the **Wireless Communication Switch** is turned on.
2. Click **start** and select **Connect to** -> **Wireless Network Connection**.
3. Select **Set up a wireless network for a home or small office**.
4. Follow the wizard. You will need the name of the wireless network together with security settings. Consult the documentation accompanied with your router or ask your wireless network administrator for the settings.

Security

- TOSHIBA strongly recommend that you enable WEP (encryption) functionality, otherwise your computer will be open to illegal access by an outsider using a wireless connection. If this occurs, the outsider may illegally access your system, eavesdrop, or cause the loss or destruction of stored data.
- TOSHIBA is not liable for the loss of data due to eavesdropping or illegal access through the wireless LAN and the damage thereof.

Bluetooth wireless technology

Bluetooth® wireless technology eliminates the need for cables between electronic devices such as desktop computers, printers and mobile phones.

You cannot use the computer's built-in Bluetooth functions and an optional Bluetooth SD Card 3 simultaneously. For reference, Bluetooth wireless technology has the following features:

Worldwide operation

The Bluetooth radio transmitter and receiver operate in the 2.4GHz band, which is license-free and compatible with radio systems in most countries in the world.

Radio links

You can easily establish links between two or more devices, with these links being maintained even if the devices are not within a line-of-sight of each other.

Security

Two advanced security mechanisms ensure a high level of security:

- Authentication prevents access to critical data and makes it impossible to falsify the origin of a message.
- Encryption prevents eavesdropping and maintains link privacy.

Bluetooth® Stack for Windows® by TOSHIBA

Please note that this software is specifically designed for the following operating systems:

- Microsoft® Windows® 2000 Professional
- Microsoft® Windows® XP

Information regarding the use of this software with these operating systems is listed below, with further details being contained with the electronic help files supplied with the software.

This Bluetooth® Stack is based on the Bluetooth® Version 1.1/1.2/2.0+EDR specification. However, TOSHIBA cannot confirm the compatibility between any computing products and/or other electronic devices that use Bluetooth®, other than TOSHIBA notebook computers.

Release Notes related to the Bluetooth® Stack for Windows® by TOSHIBA

1. Installation:
   On Windows 2000 and Windows XP, the Bluetooth® Stack for Windows® by TOSHIBA software does not have a digital signature.
2. Fax application software:
   Please be aware that there is some fax application software that you cannot use on this Bluetooth® Stack.
3. Multi-user considerations:
   On Windows XP, the use of Bluetooth is not supported in a multi-user environment. This means that, when you use Bluetooth, other users that are logged into the same computer will not be able to use this type of functionality.

Product Support:

The latest information regarding operating system support, language support or available upgrades can be found on our web site http://www.toshiba-europe.com/computers/tnt/bluetooth.htm in Europe or www.pcsupport.toshiba.com in the United States.

Wireless communication switch

You can enable or disable Wireless communication function, with the on/off switch. No transmissions are sent or received when the switch is off. Slide the switch to the right to turn it on and to the left to turn it off.

- *Do not use the Wireless LAN (Wi-Fi) or Bluetooth functionalities near a microwave oven or in areas subject to radio interference or magnetic fields. Interference from a microwave oven or other source can disrupt Wi-Fi or Bluetooth operation.*
- *Turn Wi-Fi and Bluetooth functionalities off when near a person who may have a cardiac pacemaker implant or other medical electric device. Radio waves may affect pacemaker or medical device operation, possibly resulting in serious injury. Follow the instruction of your medical device when using any Wi-Fi or Bluetooth functionality.*
- *Always turn off Wi-Fi or Bluetooth functionality if the computer is near automatic control equipment or appliances such as automatic doors or fire detectors. Radio waves can cause malfunction of such equipment, possibly resulting in serious injury.*

Wireless communication indicator

The wireless communication indicator shows the status of the computer's wireless communication functions.

Indicator status	Indication
Indicator off	The wireless communication switch is off - no wireless functionality is available.
Indicator glows	Wireless communication switch is on. Wireless LAN or Bluetooth is turned on by an application.

If you used the Task Bar to disable the Wireless LAN you will need to restart the computer or follow the procedures below to enable the system to once again recognize and use wireless communications. Open or click the following: **start, Control Panel, System, Hardware, Device Manager, Network adapters, Intel® PRO/Wireless 3945BG/3945ABG Network Connection** and then select enable.

LAN

The computer has built-in support for Ethernet LAN (10 megabits per second, 10BASE-T), Fast Ethernet LAN (100 megabits per second, 100BASE-TX) and Gigabit Ethernet LAN (1000 megabits per second, 1000BASE-T). Some models are equipped with a Gigabit Ethernet LAN. This section describes how to connect/disconnect to a LAN.

Do not install or remove an optional memory module while Wake-up on LAN is enabled.

- *The Wake-up on LAN function consumes power even when the system is off. Leave the AC adaptor connected while using this feature.*
- *The Link speed (10/100/1000 megabits per second) changes automatically depending on the network conditions (connected device, cable or noise and so on).*

LAN cable types

The computer must be configured properly before connecting to a LAN. Logging onto a LAN using the computer's default settings could cause a malfunction in LAN operation. Check with your LAN administrator regarding set-up procedures.

If you are using Gigabit Ethernet LAN (1000 megabits per second, 1000BASE-T), be sure to connect with a CAT5E cable or higher. You cannot use a CAT3 or CAT5 cable.

If you are using Fast Ethernet LAN (100 megabits per second, 100BASE-TX), be sure to connect with a CAT5 cable. You cannot use a CAT3 cable.

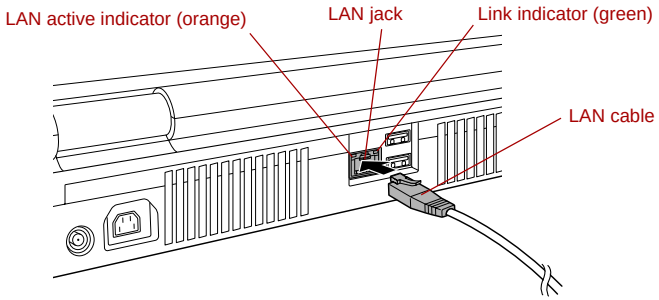
If you are using Ethernet LAN (10 megabits per second, 10BASE-T), you can connect with either a CAT5 or a CAT3.

Connecting the LAN cable

To connect the LAN cable, follow the steps as detailed below:

- *Connect the AC adaptor before connecting the LAN cable. The AC adaptor must remain connected during LAN use. If you disconnect the AC Adaptor while the computer is accessing a LAN, the system may hang up.*
- *Do not connect any other cable to the LAN jack except the LAN cable. Otherwise, malfunctions or damage may occur.*
- *Do not connect any power supplying device to the LAN cable that is connected to the LAN jack. Otherwise, malfunctions or damage may occur.*

1. Turn off the power to the computer and to all external devices connected to the computer.
2. Plug one end of the cable into the LAN jack. Press gently until you hear the latch click into place.



Connecting the LAN cable

3. Plug the other end of the cable into a LAN hub connector. Check with your LAN administrator before connecting to a hub.

When the computer is exchanging data with the LAN, the **LAN Active** *indicator glows orange. When the computer is connected to a LAN hub but is not exchanging data, the* **Link** *indicator glows green.*

Disconnecting the LAN cable

To disconnect the LAN cable, follow the steps as detailed below:

Make sure the **LAN Active** *indicator (orange LED) is out before you disconnect the computer from the LAN.*

1. Pinch the lever on the connector in the computer's LAN jack and pull out the connector.
2. Disconnect the cable from the LAN hub in the same manner. Check with your LAN administrator before disconnecting from the hub.

Cleaning the computer

To help ensure long, trouble-free operation, keep the computer free of dust and dirt, and use care with all liquids around it.

- Be careful not to spill liquids into the computer. If the computer does get wet, turn the power off immediately and let the computer dry completely - in these circumstance you should get the computer inspected by an authorized service provider in order to assess the scope of any damage.
- Clean the plastics of the computer using a slightly water dampened cloth.
- You can clean the LCD display screen by spraying a small amount of glass cleaner onto a soft, clean cloth and then wiping the screen gently with the cloth.

Never spray cleaner directly onto the computer or let liquid run into any part of it. Never use harsh or caustic chemical products to clean the computer.

Moving the computer

The computer is designed for rugged durability. However, a few simple precautions taken when moving the computer will help ensure trouble-free operation.

- Make sure all disk activity has ended before moving the computer - check the indicators on the front of the computer.
- If a CD, DVD or HD DVD is in the drive, remove it and make sure that the disc tray is securely closed.
- Turn off the power to the computer.
- Disconnect the AC adaptor and all peripherals before moving the computer.
- Close the LCD display panel.
- Do not pick up the computer by its LCD display panel.
- Before carrying your computer, shut it down, disconnect the AC adaptor and allow it to cool down - a failure to follow this instruction may result in minor heat injury.
- Be careful not to subject the computer to impact or shock - a failure to follow this instruction could result in damage to computer, computer failure or loss of data.
- Never transport your computer with any PC Cards installed - this may cause damage to either the computer and/or the PC Card resulting in product failure.
- Always use a suitable carry case when transporting the computer.
- When carrying your computer, be sure to hold it securely so that it does not fall or hit anything.
- Do not carry your computer by holding any of its protruding elements.

Chapter 5

The Keyboard

The computer's keyboard layouts are compatible with a 101/102-key enhanced keyboard - by pressing some keys in combination, all of the 101/102-key enhanced keyboard functions can be performed on the computer.

The number of keys available on your keyboard will depend on which country/region your computer is configured for, with keyboards being available for numerous languages.

In use there are six different types of keys, specifically typewriter keys, function keys, soft keys, Hot keys, Windows special keys and the keypad overlay.

Typewriter keys

The typewriter keys produce the upper-case and lower-case letters, numbers, punctuation marks, and special symbols that appear on the screen. However, there are some differences between using a typewriter and using a computer keyboard:

- Letters and numbers produced in computer text vary in width. Spaces, which are created by a "space character" may also vary depending on line justification and other factors.
- The lowercase l (el) and the number 1 (one), together with the uppercase O (oh) and the 0 (zero), are not interchangeable on computers as they are on a typewriter.
- The **Caps Lock** function key locks only the alphabetic characters into upper-case while the Shift Lock function on a typewriter places all keys in the shifted position.
- The **Shift** keys, the **Tab** key, and the **BkSp** (backspace) key perform the same function as their typewriter counterparts but also have special computer functions.

Never remove the key caps on your keyboard. Doing so could cause damage to the parts under the key caps.

Function keys: F1 ... F12

The function keys (not to be confused with the special **Fn** key) are the twelve keys at the top of your keyboard - these keys function differently from other keys.

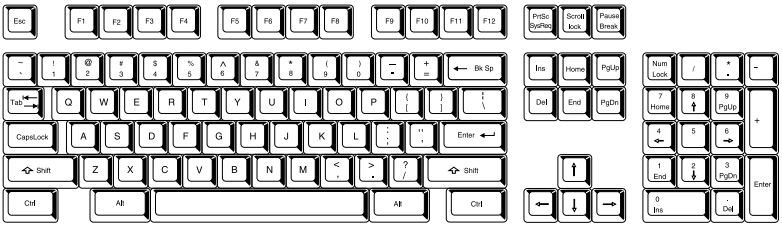
F1 through **F12** are called function keys because they execute programmed functions when pressed and, when used in combination with the **Fn** key, those keys marked with icons also execute specific functions on the computer. Please refer to the section, *Soft keys: Fn key combinations*, in this chapter for further information, taking care to note that the function executed by individual keys will depend on the software you are using.

Soft keys: Fn key combinations

The **Fn** (function) is unique to TOSHIBA computers and is used in combination with other keys to form soft keys. Soft keys are key combinations that enable, disable or configure specific features.

Please note that some software may disable or interfere with soft-key operations, and that the soft-key settings are not restored when the computer returns from Standby Mode.

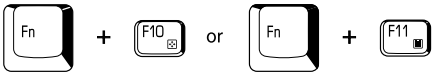
Emulating keys on an enhanced keyboard



A 101-key enhanced keyboard layout

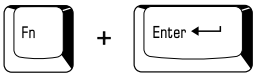
The computer's keyboard is designed to provide all the features of the 101-key enhanced keyboard. The 101/102-key enhanced keyboard has a numeric keypad and Scroll Lock key, and also provides additional **Enter** and **Ctrl** keys to the right of the main keyboard. Since the computer's keyboard is smaller and has fewer keys, some of the enhanced keyboard functions must be simulated using two keys instead of one on the larger keyboard.

In the event that your software requires you to use keys that the computer's keyboard does not have, pressing the **Fn** key together with one of the following keys, will simulate the enhanced keyboard's functions.



Press **Fn** + **F10** or **Fn** + **F11** to access the computer's integrated keypad. When activated, the keys with grey markings on their bottom edge become either numeric keypad keys (**Fn** + **F11**) or cursor control keys (**Fn** + **F10**). Please refer to the *Keypad overlay* section in this chapter for more information on how to operate these keys, taking care to note that the power on default for both settings is off.

Press **Fn** + **F12** (**ScrLock**) to lock the cursor on a specific line. The power on default is off.



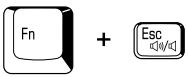
Press **Fn** + **Enter** to simulate **Enter** on the enhanced keyboard's numeric keypad.

Press **Fn** + **Ctrl** to simulate the enhanced keyboard's right **Ctrl** key.

Hot keys

Hot keys (**Fn** + a **function** or **Esc** key) let you enable or disable certain features of the computer.

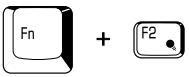
The Hot key functions are supported only under Windows, not supported under QosmioPlayer.



Sound mute: Pressing **Fn** + **Esc** in a Windows environment turns sound on or off. When you press these hot keys, the current setting will change and be displayed as an icon.

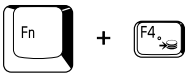
Instant security: Press **Fn** + **F1** to blank the screen to prevent others from accessing your data. To restore the screen and original settings either press a key on the keyboard or use one of the integrated pointing devices.

If a Windows Logon Password is registered, a dialog box will appear into which you can enter the password and click **OK**. If no password is set, the screen will simply be restored back to the application you were working on.

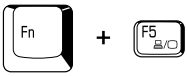


Power save mode: If you press **Fn** + **F2** in a Windows environment, a window will be displayed showing the currently selected Power Save Mode. You are then able to hold down the **Fn** key, release the **F2** key and press it again in order to toggle between the various modes that are available - releasing both the **Fn** and **F2** keys will put the selected setting into effect. In addition, you can also change this setting through the Profile options in the TOSHIBA Power Saver.

Standby Mode: Pressing **Fn** + **F3** places the computer into Standby Mode. Before entering Standby Mode, a dialog box will be displayed asking for your confirmation, although it is possible to suppress this being displayed by selecting the check box that it contains.

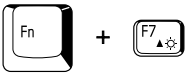


Hibernation Mode: Pressing **Fn** + **F4** places the computer into Hibernation Mode. Before entering Hibernation Mode, a dialog box will be displayed asking for your confirmation, although it is possible to suppress this being displayed by selecting the check box that it contains.



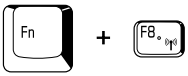
Display selection: Press **Fn** + **F5** to change the active display device. When you press these hot keys, a window will be displayed showing the available devices that can be selected - you are then able to hold down the **Fn** key, release the **F5** key and press it again in order to toggle between the various devices that are available, while releasing both the **Fn** and **F5** keys will put the selected setting into effect. If you hold down these hot keys for five seconds, the display selection will return to the internal LCD display.

Internal LCD Display Brightness: Pressing **Fn** + **F6** decreases the LCD display brightness in individual steps. When you press these hot keys, the current setting will be displayed for a period of two seconds by an icon. You are also able to change this setting through the Screen brightness item of the Basic Setup tab within the TOSHIBA Power Saver.



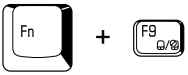
Internal LCD Display Brightness: Pressing **Fn** + **F7** increases the LCD display brightness in individual steps. When you press these hot keys, the current setting will be displayed for a period of two seconds by an icon. You are also able to change this setting through the Screen brightness item of the Basic Setup tab within the TOSHIBA Power Saver.

The clarity of the image on the internal LCD display will increase with the brightness level.

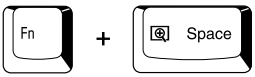


Wireless setting: If your computer has both Bluetooth and Wireless LAN functions, you can press **Fn** + **F8** to select which type of wireless communication you want to use. When you press these hot keys, a dialog box will appear. Continue holding down **Fn** and press **F8** to change the setting. If wireless communication is turned off, **`Disabled Wireless Communication Switch`** will be displayed.

If no wireless communication device is installed, no dialog box will appear.



Touch Pad: Pressing **Fn** + **F9** in a Windows environment enables or disables the Touch Pad function. When you press these hot keys, the current setting will change and be displayed as an icon.



LCD screen resolution selection: Press **Fn** + **Space** keys to change the display resolution. Each time when you press these hot keys, the resolution will change depending on the specification of the LCD display panel - with an WXGA+ system you can change the resolution between 800x600 pixels and 1440x900 pixels, while with an WUXGA system you can change the resolution between 800x600 and 1920x1200 pixels.

TOSHIBA Zooming Utility (reduce): To reduce the icon size on the desktop or the font size within one of the supported application windows, press the **1** key while holding down the **Fn** key.

TOSHIBA Zooming Utility (enlarge): To increase the icon size on the desktop or the font size within one of the supported application windows, press the **2** key while holding down the **Fn** key.

Fn Sticky key

You can use the TOSHIBA Accessibility Utility to make the **Fn** key sticky, that is, you can press it once, release it, and then press an "**F number**" key. To start the TOSHIBA Accessibility utility, click **start** followed by **All Programs** followed by **TOSHIBA** followed by **Utilities** and then click **Accessibility**.

Windows special keys

The keyboard provides two keys that have special functions in Windows: Windows logo key activates the **start** menu and the other, the application key, has the same function as the secondary mouse button.

This key activates the Windows **start** menu.

This key has the same function as the secondary (right) mouse button.

Keypad overlay

Your computer's keyboard does not have a separate numeric keypad but includes a numeric keypad overlay which functions like one - this is located in the center of the keyboard with the relevant keys having grey letters at their front edge. The overlay provides the same functions as the numeric keypad on a standard 101/102-key enhanced keyboard.

Turning on the overlays

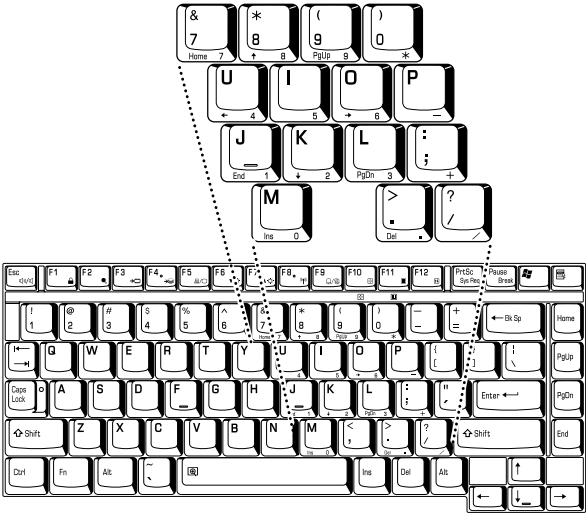
The numeric keypad overlay can be used for numeric data input or cursor and page control.

Arrow mode

To turn on Arrow Mode, press **Fn** + **F10** - the Arrow mode indicator lights and you are able to access cursor and page control functions by using the keys. You are able to press **Fn** + **F10** again to turn off this overlay function.

Numeric mode

To turn on Numeric Mode, press **Fn** + **F11** - the Numeric Mode indicator lights and you are able to access numeric characters by using the keys. You are able to press **Fn** + **F11** again to turn off this overlay function.



The numeric keypad overlay

Temporarily using normal keyboard (overlay on)

While using the overlay, you can temporarily access the normal keyboard functions without having to turn the overlay off:

1. Hold **Fn** and press any other key - this key will operate as if the overlay were off.
2. Type upper-case characters by holding **Fn** + **Shift** and pressing a character key.
3. Release **Fn** to continue using the selected overlay function.

Temporarily using overlay (overlay off)

While using the normal keyboard function, you can temporarily use the keypad overlay without having to turn it on:

1. Press and hold down **Fn**.
2. Check the keyboard indicators as pressing the **Fn** key will turn on the most recently used overlay function - if the Numeric Mode indicator lights you can use the overlay for numeric entry, while if the Arrow Mode indicator lights, you can use the overlay for cursor and page control function.
3. Release **Fn** to return to normal keyboard operation.

Temporarily changing modes

If the computer is in **Numeric Mode**, you can switch temporarily to **Arrow Mode** by pressing a Shift key, while if it is in **Arrow Mode**, you can switch temporarily to **Numeric Mode** by also pressing a Shift key.

Generating ASCII characters

Not all ASCII characters can be generated using normal keyboard operation, but you are able to generate these characters using their specific ASCII codes.

With the overlay on:

1. Hold down **Alt**.
2. Using the overlay keys, type the ASCII code of the character you require.
3. Release **Alt** - the ASCII character will appear on the display screen.

With the overlay off:

1. Hold down **Alt** + **Fn**.
2. Using the overlay keys, type the ASCII code of the character you require.
3. Release **Alt** + **Fn** - the ASCII character will appear on the display screen.

Chapter 6

Power

The computer's power resources include the AC adaptor, battery pack and any internal batteries. This chapter provides details on making the most effective use of these resources, and includes information on charging and changing batteries, tips for saving battery power, and information on the different power-up modes.

Power conditions

The computer's operating capability and battery charge status are affected by different power conditions, including whether an AC adaptor is connected, whether a battery pack is installed and what the charge level is for that battery.

Power conditions

		Power on	**Power off (no operation)**
AC adaptor connected	Battery fully charged	• Operates • LED: **Battery** blue **DC IN** blue	• LED: **Battery** blue **DC IN** blue
	Battery partially charged or no charge	• Operates • Quick Charge • LED: **Battery** orange **DC IN** blue	• Quick charge • LED: **Battery** orange **DC IN** blue
	No battery installed	• Operates • No charge • LED: **Battery** off **DC IN** blue	• No charge • LED: **Battery** off **DC IN** blue

Power conditions (continued)

		Power on	Power off (no operation)
AC adaptor not connected	Battery charge is above low battery trigger point	• Operates • LED: **Battery** off **DC IN** off	
	Battery charge is below low battery trigger point	• Operates • LED: **Battery** flashes orange **DC IN** off	
	Battery charge is exhausted	Computer goes into Standby Mode and shuts down	
	No battery installed	• Cannot operate • LED: **Battery** off **DC IN** off	

Power indicators

As shown in the below table, the **Battery, DC IN** and **Power** indicators on the system indicator alert you to the computer's operating capability and battery charge status.

Battery indicator

Check the **Battery** indicator to determine the status of the battery pack - the following indicator conditions should be noted:

Flashing orange	The battery charge is low, the AC adaptor must be connected in order to recharge the battery.
Orange	Indicates the AC adaptor is connected and the battery is charging.
Blue	Indicates the AC adaptor is connected and the battery is fully charged.
No light	Under any other conditions, the indicator does not light.

If the battery pack becomes too hot while it is being charged, the charge will stop and the **Battery** *indicator will go out. When the battery pack's temperature falls to a normal range, charging will resume - this process will occur regardless of whether the computer's power is on or off.*

DC IN indicator

Check the **DC IN** indicator to determine the power status with the AC adaptor connected - the following indicator conditions should be noted:

Blue	Indicates the AC adaptor is connected and is correctly supplying power to the computer.
Flashing orange	Indicates a problem with the power supply. You should initially try plugging the AC adaptor into another power outlet - if it still does not operate properly, you should contact your reseller or dealer.
No light	Under any other conditions, the indicator does not light.

Power indicator

Check the **Power** indicator to determine the power status of the computer - the following indicator conditions should be noted:

Blue	Indicates power is being supplied to the computer and the computer is turned on.
Blinking orange	Indicates that the computer is in Standby Mode and that there is sufficient power available (AC adaptor or battery) to maintain this condition. In Standby Mode, this indicator will turn on for one second and off for two seconds.
No light	Under any other conditions, the indicator does not light.

Battery types

The computer has three different types of batteries:

- Battery pack
- High Capacity Battery Pack (Option)
- Real Time Clock (RTC) battery

Battery pack

When the AC adaptor is not connected, the computer's main power source is a removable lithium ion battery pack, also referred to in this manual as the battery. You can purchase additional battery packs for extended use of the computer away from an AC power source although you should not change the battery pack while the AC adaptor is connected.

Before you remove the battery pack, save your data and shut down the computer, or place the computer into Hibernation Mode. Please be aware that, when placing the computer into Hibernation Mode, the contents of memory will be saved to the hard disk drive, although for safety sake, it is best to also save your data manually.

- *The battery pack is a lithium ion battery, which can explode if not properly replaced, used, handled or disposed of. Dispose of the battery as required by local ordinances or regulations. Use only batteries recommended by TOSHIBA as replacements.*
- *Always use the battery pack supplied as an accessory or an equivalent battery pack specified in the User's Manual. Other battery packs have different voltage and terminal polarities. Use of non-conforming battery packs could generate smoke or cause fire or rupture, possibly resulting in serious injury.*
- *Always dispose of used battery packs in compliance with all applicable laws and regulations. Put insulating tape, such as cellophane tape, on the electrode during transportation to avoid a possible short circuit, fire or electric shock. Failure to do so could possibly result in serious injury.*
- *Do not remove the battery pack while the computer is in Standby Mode. Data is stored in RAM, so if the computer loses power it will be lost. When the computer is powered off in Standby Mode, and the AC adaptor is not connected, the battery pack supplies power to maintain data and programs in memory. If the battery pack is completely discharged, Standby Mode will not function and the computer loses all data in memory.*

To ensure that the battery pack maintains its maximum capacity, operate the computer on battery power at least once a month until the battery pack is fully discharged - please refer to *Extending battery life* in this chapter for details of the procedure.

If the computer is continuously operated on AC power through connection to an AC adaptor for an extended period, for example more than a month, the battery may fail to retain a charge, it may not function efficiently over its expected life and the **Battery** indicator may not properly indicate a low-battery condition.

High Capacity Battery Pack (Option)

A High Capacity Battery Pack is installable instead of a main battery pack. The connection method of High Capacity Battery Pack is the same as that of main battery pack.

- *The battery pack is a lithium ion battery, which can explode if not properly replaced, used, handled or disposed of. Dispose of the battery as required by local ordinances or regulations. Use only batteries recommended by TOSHIBA as replacements.*
- *Do not remove the battery pack while the computer is in Standby Mode. Data is stored in RAM, so if the computer loses power it will be lost. When the computer is powered off in Standby Mode, and the AC adaptor is not connected, the battery pack supplies power to maintain data and programs in memory. If the battery pack is completely discharged, Standby Mode cannot function and the computer loses all information in memory.*
- *When the High capacity battery pack is connected to the computer, do not hold on only to the High capacity battery pack when lifting the computer up.*
  The High capacity battery pack may separate from the computer, causing it to fall and cause injuries.

Real Time Clock battery

The Real Time Clock (RTC) battery provides power for the internal real time clock and calendar function and also maintains the system configuration while the computer is switched off. If the RTC battery becomes completely discharged, the system will lose this information and the real time clock and calendar will stop working - in this instance the following message will be displayed when you turn on the power:

```
**** RTC battery is low or CMOS checksum is
inconsistent ****
Press [F1] key to set Date/Time.
```

You can change the Real Time Clock settings by switching the computer on while pressing the **Esc** key followed by the **F1** key when prompted. Please refer to Chapter 10, *Troubleshooting* for further information.

The computer's RTC battery is a Ni-MH battery and should be replaced only by your dealer or by a TOSHIBA service representative. The battery can explode if not properly replaced, used, handled or disposed of. Dispose of the battery as required by local ordinances or regulations.

The RTC battery does not charge while the computer is turned off even if the AC adapter is attached.

Care and use of the battery pack

The battery pack is a vital component of portable computing and, as such, taking proper care of it will help ensure a longer operating time on battery power as well as deliver a longer life for your battery pack. The instructions detailed in this section will help to ensure safe operation and maximum performance.

Safety precautions

Mishandling of battery packs can cause death, serious injury or property damage. Carefully observe the following advisories:

Warning: Indicates a potentially hazardous situation, which could result in death or serious injury, if you do not follow instructions.

Caution: Indicates a potentially hazardous situation, which if not avoided, may result in moderate or minor injury or property damage.

Note: Provides important information.

Warning

1. Never attempt to dispose of a battery pack by burning or by throwing it into a fire, and never allow exposure to a heating apparatus (e.g., microwave oven). Heat can cause a battery pack to explode and possibly cause serious injury.
2. Never attempt to disassemble, tamper with or repair a battery pack. The battery pack could overheat and ignite. Leakage of the caustic alkaline solution or other electrolytic substances could cause fire, possibly resulting in death or serious injury.
3. Never short circuit the battery pack by either accidentally or intentionally bringing the battery terminals in contact with another conductive object. This could cause serious injury or a fire, and could also damage the battery pack. Always wrap the battery pack in plastic (or place it in a plastic bag) whenever transporting it, to avoid exposing the terminals to another conductive object which could result in serious injury. Always cover the metal terminals with insulating tape when disposing of the battery pack, to prevent accidental short circuiting which could result in serious injury.
4. Never drive a nail or any other sharp object into the battery pack, hit battery pack with a hammer or other object or step on it. Doing so could cause a fire or explosion possibly resulting in serious injury.
5. Never charge the battery pack by a method other than as instructed in the User's Manual. Doing so could cause a fire or explosion possibly resulting in serious injury.
6. Never connect the battery pack to a plug socket or a car cigarette plug socket. The battery pack could rupture or ignite causing a fire or explosion possibly resulting in serious injury.
7. Never allow a battery pack to become wet. A wet battery pack will overheat or ignite causing rupture or fire, possibly resulting in death or serious injury.

8. Never store a battery pack in an area of high humidity. This could cause a fire or explosion possibly resulting in serious injury.
9. Never expose a battery pack to abnormal shock, vibration or pressure. The battery pack's internal protective device could fail, causing it to overheat or ignite resulting in caustic liquid leakage, or explosion or fire, possibly resulting in death or serious injury.
10. Never subject a battery pack to heat, and never store it or use it near a heat source. The battery pack could ignite or explode when heated or burned, possibly resulting in death or serious injury. Subjecting a battery pack to heat could also cause caustic liquid to leak. It can also cause failure, malfunction, or loss of stored data.
11. Always use the battery pack supplied as an accessory or an equivalent battery pack specified in the User's Manual. Other battery packs have different voltage and terminal polarities. Use of non-conforming battery packs could generate smoke or cause fire or rupture, possibly resulting in serious injury.
12. Never allow caustic electrolyte fluid leaked from the battery pack to contact your eyes, body or clothing. If caustic electrolyte fluid from the battery pack should contact your eyes, immediately wash your eyes with large amounts of running water and obtain prompt medical attention, to help prevent permanent eye damage. If electrolyte fluid should contact any part of your body, immediately wash it off under running water to help prevent skin rashes. If electrolyte fluid should contact your clothes, promptly remove them to help prevent the electrolyte fluid from contacting your body, possibly resulting in serious injury.
13. Always immediately turn the power off and disconnect the power cable plug from the plug socket if you observe any of the following conditions:
    - Offensive or unusual odor
    - Excessive heat
    - Discoloration
    - Deformation
    - Smoke
    - Other unusual event during use, such as abnormal sound

    In such an event, immediately remove the battery pack from the PC. In some instances, you might have to wait for the PC to cool down before removing the battery pack, in order to avoid any possible minor injury due to heat exposure. Do not turn on the PC's power again until an authorized Toshiba service provider has checked it for safety. Continued use could cause a fire or rupture possibly resulting in serious injury or PC failure including but not limited to the loss of data.
14. Always dispose of used battery packs in compliance with all applicable laws and regulations. Put insulating tape, such as cellophane tape, on the electrode during transportation to avoid a possible short circuit, fire or electric shock. Failure to do so could possibly result in serious injury.

15. Make sure the battery is securely installed in the computer before attempting to charge the battery pack. Improper installation could generate smoke or fire, or cause the battery pack to rupture.
16. Keep the battery pack out of reach of infants and children. It can cause injury.

Caution

1. Use only battery packs recommended by TOSHIBA as replacements.
2. When installing a battery pack or before moving the PC, always make sure the battery pack is inserted correctly and securely. If the battery falls out, while you are carrying the PC, you could be injured or the battery pack could be damaged.
3. Charge the battery pack only in an ambient temperature between 5 and 35 degrees Celsius. Otherwise, the electrolyte solution might leak, battery pack performance might deteriorate and the battery life might be shortened.
4. Never continue to use a battery pack after its recharging capability has become impaired, or after the warning message indicating that the battery pack power is exhausted has been displayed.
5. Continued use of an exhausted or impaired battery pack could result in the loss of data or damage to PC.
6. Never install or remove the battery pack without first turning off the power and disconnecting the AC adaptor. Never remove the battery pack while the computer is in Standby Mode. Data will be lost.

Note

1. Never remove the battery pack while the Wake-up on LAN function is enabled. Data will be lost. Before you remove a battery pack, disable the Wake-up on LAN function.
2. Never remove the battery pack while the Wake-up on Wireless LAN function is enabled. Data will be lost. Before you remove a battery pack, disable the Wake-up on Wireless LAN function.
3. To ensure the battery pack maintains maximum capacity, operate the computer on battery power once a week until the battery pack is fully discharged. Refer to the section *Extending battery life* in this chapter for procedures. If the computer is continuously operated on AC power for an extended period, more than a week, the battery might fail to retain a charge. It might not function efficiently over the expected life of the battery pack and the **Battery** indicator might not indicate a low-battery condition.
4. After the battery pack is charged, avoid leaving the AC adaptor connected and the computer turned off for more than a few hours at a time. Continuing to charge a fully-charged battery pack can damage the battery.

Refer to the enclosed Instruction Manual for Safety and Comfort for detailed precautions and handling instructions.

- *Make sure the battery is securely installed in the computer before attempting to charge the battery pack. Improper installation could generate smoke or fire, or cause the battery pack to rupture.*
- *Keep the battery pack out of reach of infants and children. It can cause injury.*

- *Use only battery packs recommended by TOSHIBA as replacements.*
- *Charge the battery pack only in an ambient temperature between 5 and 35 degrees Celsius. Otherwise, the electrolyte solution might leak, battery pack performance might deteriorate and the battery life might be shortened.*
- *Never install or remove the battery pack without first turning off the power and disconnecting the AC adaptor. Never remove the battery pack while the computer is in Standby Mode. Data will be lost.*

- *Never remove the battery pack while the Wake-up on LAN function is enabled. Data will be lost. Before you remove a battery pack, disable the Wake-up on LAN function.*
- *Never remove the battery pack while the Wake-up on Wireless LAN function is enabled. Data will be lost. Before you remove a battery pack, disable the Wake-up on Wireless LAN function.*
- *To ensure the battery pack maintains maximum capacity, operate the computer on battery power once a week until the battery pack is fully discharged. Refer to the section Extending battery life in this chapter for procedures. If the computer is continuously operated on AC power for an extended period, more than a week, the battery might fail to retain a charge. It might not function efficiently over the expected life of the battery pack and the* **Battery** *indicator might not indicate a low-battery condition.*
- *After the battery pack is charged, avoid leaving the AC adaptor connected and the computer turned off for more than a few hours at a time. Continuing to charge a fully-charged battery pack can damage the battery.*

Charging the batteries

When the power in the battery pack becomes low, the **Battery** indicator will flash orange to indicate that only a few minutes of battery power remain. If you continue to use the computer while the **Battery** indicator flashes, the computer will enable Hibernation Mode so that you do not lose any data, and automatically switch itself off.

The computer will enter Hibernation Mode only if it is enabled in two places, specifically the Hibernate tab in Power Options and the Setup Actions tab within the TOSHIBA Power Saver.

You must recharge a battery pack when it becomes discharged.

Procedures

To recharge a battery pack while it is installed in the computer, connect the AC adaptor to the DC IN 15V jack and plug the other end into a working outlet - the **Battery** indicator will glow orange while the battery is being charged.

Use only the computer connected to an AC power source or the optional TOSHIBA Battery charger to charge the battery pack. Never attempt to charge the battery pack with any other charger.

Time

The following table shows the approximate time required to fully charge a discharged battery.

Charging time (hours)

Battery type	Power on	Power off
Battery pack (4700mAh)	about 3.0 to 3.5 or longer	about 3.0
Battery Pack (7050mAh)	about 3.0 to 5.0 or longer	about 3.0
RTC battery	8	Doesn't charge

Please be aware that the charging time when the computer is on is affected by ambient temperature, the temperature of the computer and how you are using the computer - if you make heavy use of external devices for example, the battery might scarcely charge at all during operation. Please refer to the section Maximizing battery operating time *for further information.*

Battery charging notice

The battery may not begin charging immediately under the following conditions:

- The battery is extremely hot or cold (if the battery is extremely hot, it might not charge at all). To ensure the battery charges to its full capacity, you should charge it at room temperature of between 10° to 30°C (50° to 88°F).
- The battery is nearly completely discharged. In this instance you should leave the AC adaptor connected for a few minutes and the battery should begin charging.

The **Battery** indicator may show a rapid decrease in battery operating time when you try to charge a battery under the following conditions:

- The battery has not been used for a long time.
- The battery has completely discharged and been left in the computer for a long time.
- A cool battery is installed in a warm computer.

In such cases you should follow the steps as detailed below:

1. Fully discharge the battery by leaving it in the computer with the power on until the system automatically switches itself off.
2. Connect the AC adaptor to the DC IN 15V jack of the computer, and to a wall outlet that is supplying power.
3. Charge the battery until the **Battery** indicator glows blue.

Repeat these steps two or three times until the battery recovers normal capacity.

Leaving the AC adaptor continually connected will shorten battery life. At least once a month you should run the computer on battery power until the battery is fully discharged before you then recharge the battery.

Monitoring battery capacity

The remaining battery power can be monitored in the TOSHIBA Power Saver.

- *You should wait for approximately fifteen seconds after turning on the computer before trying to monitor the remaining operating time. This is because the computer needs this time to check the battery's remaining capacity and then calculate the remaining operating time, based on this together with the current power consumption.*
- *Please be aware that the actual remaining operating time may differ slightly from the calculated time.*
- *With repeated discharges and recharges, the battery's capacity will gradually decrease. In view of this it will be noted that an often used, older battery will not operate for as long as a new battery even when both are fully charged. In this instance, the TOSHIBA Power Saver will indicate a 100% charge for both the old and new battery, but the displayed estimated time remaining will be shorter for the older battery.*

Maximizing battery operating time

A battery's usefulness depends on how long it can supply power on a single charge, while how long the charge lasts in a battery depends on:

- How you configure the computer in relation to its available power saving options. The computer provides the ability to configure various power saving settings through the TOSHIBA Power Saver, in order to conserve battery power. As an overview these settings cover:
  - Processor speed
  - Screen brightness
  - System cooling method
  - System Standby Mode
  - System Hibernation Mode
  - Display power off period
  - Hard disk drive power off period

- How often and for how long you use the hard disk drive, optical disc and floppy disk drives.
- How much charge the battery contained to begin with.
- How you use optional devices, such as a PC Cards, to which the battery supplies power.
- Whether you enable Standby Mode, which can conserve battery power if you are frequently turning the computer off and on.
- Where you store your programs and data.
- Whether you close the LCD display panel when you are not using the keyboard - closing the display saves power.
- The environmental temperature - operating time decreases at low temperatures.
- The condition of the battery terminals - you should always ensure the terminals stay clean by wiping them with a clean dry cloth before installing the battery pack.

Retaining data with power off

When you turn off your computer with fully charged batteries, the batteries retain data for the following approximate time periods.

Retention Time

Battery type	State and Retention Time
Battery pack (4700mAh)	about 3 days (Standby Mode) about 30 days (Boot Mode)
High Capacity Battery Pack (7050mAh)	about 5 days (Standby Mode) about 50 days (Boot Mode)
RTC battery	30 days

Extending battery life

To maximize the life of your battery packs:

- At least once a month, disconnect the computer from a power source and operate it on battery power until the battery pack fully discharges. Before doing so, follow the steps as detailed below.
  1. Turn off the computer's power.
  2. Disconnect the AC adaptor and turn on the computer's power - if it does not switch on then go to Step 4.
  3. Operate the computer on battery power for five minutes. If you find that the battery pack has at least five minutes of operating time, continue operating until the battery pack is fully discharged, however, if the **Battery** indicator flashes or there is some other warning to indicate a low battery condition, go to Step 4.

4. Connect the AC adaptor to the DC IN 15V jack of the computer, and to a wall outlet that is supplying power. The **DC IN** indicator should glow blue, and the **Battery** indicator should glow orange to indicate that the battery pack is being charged, however, in the event that **DC IN** indicator does not glow this indicates that power is not being supplied - check the connections for the AC adaptor and the power cord.
5. Charge the battery pack until the **Battery** indicator glows blue.

- If you have extra battery packs, rotate their use.
- If you will not be using the system for an extended period, for example for more than one month, remove the battery pack from the computer.
- Disconnect the AC adaptor when the battery is fully charged - overcharging will make the battery hot and can shorten its operating life.
- If you are not going to use the computer for more than eight hours, disconnect the AC adaptor.
- Store spare battery packs in a cool dry place out of direct sunlight.
- In the event that the battery pack is not used for a long period of time (more than one month), when the remaining battery charge is between 30%-50% then remove the battery pack from the main body of the PC and store it.

Replacing the battery pack

Please be aware that the battery pack is classified as a consumable item.

The operating life of the battery pack will gradually reduce through repeated charging and discharging, and will need to be replaced when it reaches the end of its operating life. In addition to this, you might also replace a discharged battery pack with a charged spare when you are operating your computer away from an AC power source for an extended period of time.

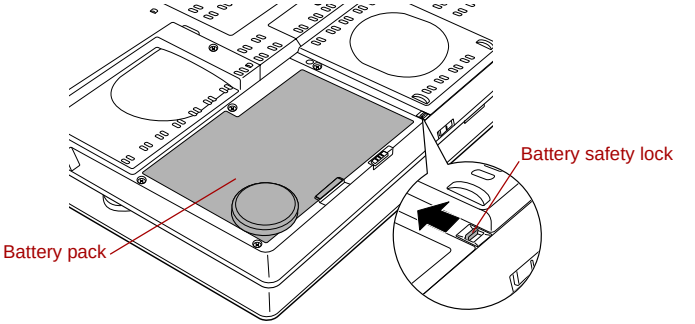
This section explains how to remove and install the battery pack, and begins with the removal process which is detailed through the following steps.

- *Do not remove the battery pack while the computer is in Standby Mode. Data is stored in RAM, so if the computer loses power it will be lost.*
- *In Hibernation Mode, data will be lost if you remove the battery pack or disconnect the AC adaptor before the save is completed. Wait for the* **Hard Disk Drive** *indicator to go out.*
- *Do not touch the battery release latch while holding the computer or the battery pack might fall out due to the unintentional release of the battery release latch and cause injuries.*

To remove a discharged battery, follow the steps as detailed below:

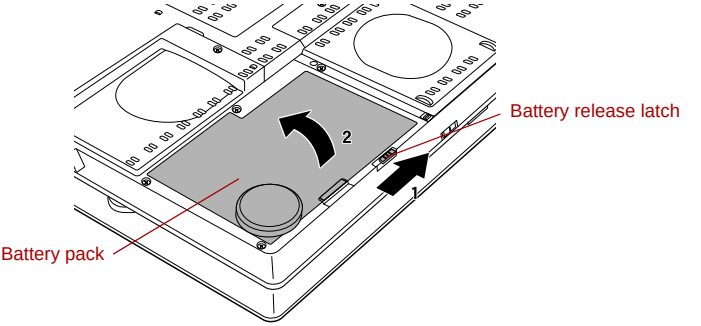
1. Save your work.
2. Turn the computer's power off - ensure that the **Power** indicator is off.
3. Remove all cables and peripherals that are connected to the computer.

4. Close the LCD display panel and turn the computer upside down.
5. Slide the battery safety lock towards the release ( ) position to make the battery release latch movable.



Releasing the battery pack (1)

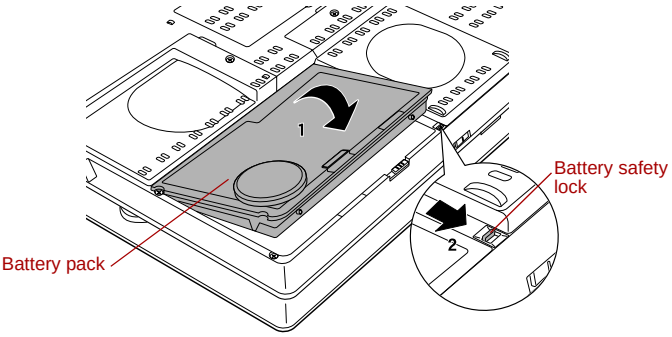
6. Slide and hold the battery release latch (1) to disengage the battery pack and then remove it from the computer (2).



Releasing the battery pack (2)

To install a battery, follow the steps as detailed below:

1. Insert the battery pack as far as it will go into the computer (1).
2. Ensure that the battery pack is securely in place and the battery safety lock (2) is in its ( ) position.



Securing the battery pack

3. Turn your computer over.

TOSHIBA Password Utility

The TOSHIBA Password Utility provides two levels of password security: User and Supervisor.

Passwords set in TOSHIBA Password Utility are different from the Windows password.

User password

To start the utility, point to or click the following items:

start -> All Programs -> TOSHIBA -> Utilities -> Password Utility

- **Set** (button)
  Click this button to register a password of up to 50 characters. After a password is set, you will be prompted to enter it when you start the computer.

- *After you set the password, a dialog box will be displayed asking whether you want to save it to a floppy disk or other media. If you forget the password, you can open the password file on another computer. Be sure to keep the media in a safe place.*
- *When entering the character string to register the password, enter from the keyboard character by character and do not enter as ASCII code or copy-and-paste the character string. In addition, ensure that the registered password is correct by outputting the character string to the password file.*

- **Delete** (button)
  Click this button to delete a registered password. Before you can delete a password, you must first enter the current password correctly.
- **Change** (button)
  Click this button to change a registered password. Before you can change a password, you must first enter the current password correctly.

- **Owner String** (text box)
  You can use this box to associate text with the password. After you enter the text, click **Apply** or **OK**. When you switch the computer on, this text will be displayed, for example, to prompt the user to enter the password.

- *If you forget your HDD User Password, TOSHIBA will NOT be able to assist you, and your HDD will be rendered COMPLETELY and PERMANENTLY INOPERABLE. TOSHIBA will NOT be held responsible for any loss of any data, any loss of use or access to your HDD, or for any other losses to you or any other person or organization that result from the loss of access to your HDD. If you can't accept this risk, don't register the HDD User Password.*
- *When saving the HDD User Password shut down or restart the computer. If the computer is not shut down or restarted, the saved data may not be correctly reflected. For more information on shutting down or restarting the computer, refer to* Turning on the power *in Chapter 3.*

Refer to Starting and Ending the BIOS Setup Program *section in Chapter 7 for more information.*

Supervisor password

To set a supervisor password, follow the steps below.

1. Click **start**.
2. Click **Run**.
3. Enter the following:
   C:\Program Files\Toshiba\Windows Utilities\SVPWTool\TOSPU.EXE

If you set a supervisor password, some functions might be restricted when a user logs on with the user password.

This utility lets you do the following:

- Register, delete or change the supervisor password.
- Specify restrictions for general users.

Starting the computer by password

If you have already registered a password, enter the password manually.

The password is necessary only if the computer was shut down in Boot Mode. It is not needed in Standby Mode.

1. Turn on the power as described in Chapter 3, *Getting Started*. The following message will appear in the LCD:

Password =

At this point, the hotkeys **Fn** + **F1** *to* **F9** *do not work. They will function after you enter the password.*

2. Enter the password.
3. Press **Enter**.

If you enter the password incorrectly three times in a row, the computer shuts off. In this case, you must turn the computer back on to retry password entry.

Power-up modes

The computer has three different power-up modes as follows:

- Boot Mode: The computer will shut down without saving data - in view of this you must always save your work before you turn the computer off.
- Hibernation Mode: Data in memory will be saved to the hard disk drive.
- Standby Mode: Data will maintained in the computer's memory.

Please refer to the sections Turning on the power *and* Turning off the power *in Chapter 3, Getting Started for further information.*

Windows utilities

You can configure various settings associated with both Standby Mode and Hibernation Mode within the TOSHIBA Power Saver.

Hot keys

You can use the **Fn** + **F3** hot key to enter Standby Mode or **Fn** + **F4** to enter Hibernation Mode - please refer to Chapter 5, *The Keyboard* for further details.

Panel power on/off

You can set up your computer so that power is turned off automatically when you close the display panel, and turned on again when you open it. Please note that this function is only available for Standby Mode or Hibernation Mode, not for Boot Mode.

If the panel power off function is enabled, and you manually shut down Windows, do not close the computer's LCD display panel until the shut down process has been completed.

System Auto Off

This feature turns the system off automatically if it is not used for a set period of time, and can be configured for both Standby Mode or Hibernation Mode.

Chapter 7

HW Setup

This chapter explains how to use the TOSHIBA HW Setup program to configure your computer, and provides information on the other settings.

Accessing HW Setup

To run the HW Setup program, click **start** followed by **Control Panel** followed by **Printers and Other Hardware** and then click **TOSHIBA HWSetup**.

HW Setup window

The HW Setup window contains a number of tabs (General, Display, Boot Priority, Keyboard, CPU, LAN, Device Config and USB) to allow specific functions of the computer to be configured.

In addition there are also three buttons: **OK**, **Cancel** and **Apply**.

OK	Accepts your changes and closes the HW Setup window.
Cancel	Closes the window without accepting your changes.
Apply	Accepts all your changes without closing the HW Setup window.

General

This window displays the BIOS version and contains two buttons: **Default** and **About**.

Default	Return all HW Setup values to the factory settings.
About	Display the HW Setup version.

Setup

This field displays the installed **BIOS version** and date.

Display

This tab lets you customize your computer's display settings for either the internal LCD screen or for an external monitor.

Power On Display

This tab allows you to select the display to be used when the computer is started. Please note that this setting is only available on standard VGA mode and is not available as part of the Windows Desktop properties.

Auto-Selected	Selects an external monitor if one is connected, otherwise, it selects the internal LCD display (default).
LCD + Analog RGB	Selects both the internal LCD and an external monitor for simultaneous display.

If the connected external monitor does not support the selected SVGA mode, selecting the LCD + Analog RGB mode will not display on that monitor.

If the computer was using multiple display devices when it was last shut down and those devices are still present when Windows starts again the computer will continue to use the devices after Windows starts.

If the devices are no longer present the computer will use the display specified in the BIOS "Power On Display" setting (if no external display device is connected, the computer will use the internal (attached) LCD display regardless of the BIOS "Power On Display" setting).

TV Type

You can select the type of TV to receive the signal.

NTSC (JAPAN)	For Japanese television sets (Default value).
PAL (S-Video)	For European television sets.
525p (480p, D2)	This can only be selected for models with D-Video out port.
1125i (1080i, D3)	This can only be selected for models with D-Video out port.
750p (720p, D4)	This can only be selected for models with D-Video out port.
525i (480, D1)	This can only be selected for models with D-Video out port.
NTSC (US)	For US television sets.

When the D video output terminal is connected to the television, select either D1 through D4 in accordance to the terminal on the television.

Boot Priority

Boot Priority Options

This tab allows you to select the priority for booting the computer - the following settings are available:

"HDD" here refers to the Built-in HDD that is defined in the HDD Priority Option so that it should be recognized first.

FDD –> **HDD** –> **CD-ROM** –> **LAN**	The computer looks for bootable files on devices in the following order: 1. floppy disk drive*1, 2. hard disk drive, 3. CD-ROM*2, 4. LAN.
HDD –> **FDD** –> **CD-ROM** –> **LAN**	The computer looks for bootable files on devices in the following order: 1. hard disk drive, 2. floppy disk drive*1, 3. CD-ROM*2, 4. LAN.
FDD –> **CD-ROM** –> **LAN** –> **HDD**	The computer looks for bootable files on devices in the following order: 1. floppy disk drive*1, 2. CD-ROM*2, 3. LAN, 4. hard disk drive.
HDD –> **CD-ROM** –> **LAN** –> **FDD**	The computer looks for bootable files on devices in the following order: 1. hard disk drive, 2. CD-ROM*2, 3. LAN, 4. floppy disk drive*1.
CD-ROM –> **LAN** –> **FDD** –> **HDD**	The computer looks for bootable files on devices in the following order: 1. CD-ROM*2, 2. LAN, 3. floppy disk drive*1, 4. hard disk drive.

FDD –> **HDD** –> **CD-ROM** –> **LAN**	The computer looks for bootable files on devices in the following order: 1. floppy disk drive*1, 2. hard disk drive, 3. CD-ROM*2, 4. LAN.
HDD –> **FDD** –> **CD-ROM** –> **LAN**	The computer looks for bootable files on devices in the following order: 1. hard disk drive, 2. floppy disk drive*1, 3. CD-ROM*2, 4. LAN.
CD-ROM –> **LAN** –> **HDD** –> **FDD**	The computer looks for bootable files on devices in the following order: 1. CD-ROM*2, 2. LAN, 3. hard disk drive, 4. floppy disk drive*1.

You can override the settings and manually select a boot device by pressing one of the following keys while the computer is booting:

U	Selects the USB floppy disk drive.
N	Selects the network.
1	Selects the primary hard disk drive.
2	Selects the primary hard disk drive 2*3.
C	Selects the CD-ROM*2.

*1 The floppy disk drive is looked for when the boot disk is contained in external floppy disk drive.

*2 In this computer, CD-ROM refers to the Fixed optical disc drive.

*3 Only the model with two HDDs is supported.

To change the boot drive, follow the steps below.

1. Hold down **F12** and switch the computer on.
2. The following menu will be displayed with, from left to right, icons to allow you to start from (a) the built-in hard disk drive 1, (b) the built-in hard disk drive 2, (c) the optical drive, (d) a floppy disk drive, and (e) the network.

Please note that a highlighted bar will only appear under the selected device.

3. Use the left/right cursor keys to highlight the boot device you want and press **Enter**.

- *If a Supervisor Password has been set, manual boot device selection functions may be restricted.*
  - *The boot device menu will appear when the "Able to run HW Setup" option has been configured.*
  - *The boot device menu will not appear when the "Unable to run HW Setup" option has been configured.*
- *If both a Supervisor Password and a User Password are set, the following should be noted:*
  - *The boot device menu will appear when you use either the Supervisor Password or the User Password to start the computer, and the "Able to run HW Setup" option has been configured.*
  - *The boot device menu will not appear when you use the User Password to start the computer and the "Unable to run HW Setup" option has been configured.*
  - *The boot device menu will appear when you use the Supervisor Password to start the computer, even if the "Unable to run HW Setup" option has been configured.*

The boot device selection methods described above will not change the boot priority settings that have been configured in HW Setup. In addition, if you press a key other than one of those listed, or if the selected device is not installed, the system will continue to boot according to the current and available settings in HW Setup.

HDD Priority Options

If more than one hard disk drive is installed in the computer, this option allows you to set the priority associated with hard disk drive detection - the first hard disk drive detected that has a valid boot command on it will be the device from which the computer will start.

Built-in HDD1 –> **Built-in HDD2 (Default)**	This option sets the priority as the built-in hard disk drive 1 followed by the built-in hard disk drive 2.
Built-in HDD2 –> **Built-in HDD1**	This option sets the priority as the built-in hard disk drive 2 followed by the built-in hard disk drive 1.

- *If a boot command is not found on the first detected hard disk drive, the system will not boot from next hard disk drive in the list, instead it will search for the next device in the Boot Priority list and startup from this as appropriate.*
- *Although, generally, most models have two hard disk drives installed, some models have only one hard disk drive. In the case of models with one hard disk drive, this setting item will not be displayed.*

Network Boot Protocol

This feature sets the protocol to remotely boot from the network.

Network Boot Protocol is not displayed for Gigabit Ethernet LAN.

[PXE] Sets PXE as the protocol (Default).

[RPL] Sets RPL as the protocol.

Keyboard

Wake-up on Keyboard

When this feature is enabled, and the computer is in Standby Mode, you can turn on the system by pressing any key. However, please be aware that this option will only work with the internal keyboard and only when the computer is in Standby Mode.

Enabled	Enables the Wake-up on Keyboard function.
Disabled	Disables the Wake-up on Keyboard function (Default).

CPU

This function allows you to set the processor's operating mode.

Please note that this option is displayed only on models with an Intel® Core™ Duo processor and an Intel® Core™ 2 Duo processor.

Dynamic CPU Frequency Mode

This option allows you to configure the power saving modes associated with the processor - the following settings are available:

Dynamically Switchable	The processor's power consumption and automatic clock speed switching functions are enabled - in use the processor's operation is automatically switched when necessary (default).
Always High	The processor's power consumption and automatic clock speed switching functions are disabled - in use the processor will always run at its highest level of power consumption and its highest speed.
Always Low	The processor's power consumption and automatic clock speed switching functions are disabled - in use the processor will always run at a lower level of power consumption and a low speed.

LAN

Wake-up on LAN

This feature lets the computer's power be turned on when it receives a wake-up signal from the LAN.

Power will be automatically turned on when a signal is received from an administrator's computer which is connected via a network.

The following settings can be changed when the Built-in LAN is **Enabled**.

Connect the AC adaptor when using the Wake-up on LAN function. The battery retention time will be shorted than the times listed in this manual when this function is enabled. Refer to the section in chapter 6, *Retaining data with power off*.

Enabled	Enables Wake-up on LAN.
Disabled	Disables Wake-up on LAN (Default).

Do not install or remove an optional memory module while Wake-up on LAN is enabled.

The Wake-up on LAN function consumes power even when the system is off. Leave the AC adaptor connected while using this feature.

Built-in LAN

This feature enables or disables the Built-in LAN.

Enabled	Enables Built-in LAN functions (Default).
Disabled	Disables Built-in LAN functions.

Device Config

Device Configuration

This option allows you to set how the computer's hardware devices will be configured.

All Devices	The computer's BIOS will setup and configure all devices.
Setup by OS	The operating system will setup and configure all of the devices that it can control (default).

PCI Express Link ASPM

This feature lets you set the PCI Express power-saving configuration.

Auto	Power-saving is enabled when the computer is running from battery power and the PCI Express device is not being used (Default).
Disabled	Disables power-saving for performance.
Enabled	Enables power-saving when the PCI Express device is not being used.

USB

USB KB/Mouse Legacy Emulation

You can use this option to enable or disable USB keyboard/mouse legacy emulation so that, even if your operating system does not support USB devices, you can still use a standard USB mouse and keyboard - to achieve this you should set the appropriate option(s) to Enabled.

Enabled	Enables the USB Keyboard/Mouse Legacy Emulation function (Default).
Disabled	Disables the USB Keyboard/Mouse Legacy Emulation function.

USB-FDD Legacy Emulation

You can use this option to enable or disable USB floppy disk drive legacy emulation so that, even if your operating system does not support USB devices, you can still use a USB floppy disk drive - to achieve this you should set this option to Enabled.

Enabled	Enables the USB floppy disk drive legacy emulation function (Default).
Disabled	Disables the USB floppy disk drive legacy emulation function.

Other settings

This section explains items and procedures other than those setup using the HW Setup program.

Starting and Ending the BIOS Setup Program

Notes Before Using the BIOS Setup Application

- *In most cases, changes to the system's configuration should be made within Windows by using applications such as* **TOSHIBA HW Setup**, **TOSHIBA Password Utility**, **TOSHIBA Power Saver**, **Windows Device Manager** *and so forth. If you make changes to the configuration through the BIOS setup program, please be aware that the configuration set through the Windows applications will take priority.*
- *Changes to the settings within the BIOS setup program will not be erased even if the power supply is switched off and the main battery removed. However, if the built-in Real Time Clock (RTC) battery runs out of power, most of the settings will revert back to their default values. However, please note that the following items will not be affected in this instance:*
  - *Password*

Starting the BIOS Setup Program

1. Switch on the computer while pressing the **Esc** key - if the **`Password =`** prompt is displayed, enter either the Supervisor Password, if one is set, or the User Password and press the **Enter** key. Please refer to Chapter 6, the *TOSHIBA Password Utility* for further details about the User Password.
2. At the **`Check system. Then press [F1] key`**. prompt, press the **F1** key - the BIOS setup application will start up.

Ending the BIOS Setup Program

In order to save the changes you have made and end the BIOS setup application, follow the steps as detailed below:

1. Press the **End** key - this will cause the **`Are you sure? (Y/N)`**. **`The changes you made will cause the system to reboot`**. prompt to be displayed at the bottom of the screen.
2. Press the **Y** key - this will save the configuration changes and end the BIOS setup application, automatically restarting the computer.

Ending the BIOS Setup Program Halfway

The configuration settings can be terminated halfway without saving any of the changes made by following the steps detailed below:

1. Press the **Esc** key - the **`Exit without saving? (Y/N)`** prompt to be displayed at the bottom of the screen.
2. Press the **Y** key - the BIOS setup application will exit and the computer will automatically restart.

Enhanced C-States

This feature enables or disables the Enhanced C-States.

The configuration for the Enhanced C-States is carried out in the BIOS setup program. This setting is displayed on the first page of the setup screen.

Enabled	This lowers the power consumption (Default).
Disabled	This does not lower the power consumption.

System configuration changes, other than changes to this setting, should be made within Windows by using applications such as **TOSHIBA HW Setup**, **TOSHIBA Password Utility**, **TOSHIBA Power Saver**, **Windows Device Manager** *and so forth.*

Core Multi - Processing

The Core Multi-Processing sets the CPU operating mode.

This option is displayed only on models with an Intel® Core™ Duo Processor.

The configuration for the Core Multi - Processing is carried out in the BIOS setup program. This setting is displayed on the first page of the setup screen.

Enabled is Dual Core mode.

Disabled is Single Core mode.

Enabled	Enables Core Multi - Processing functions (Default).
Disabled	Disables Core Multi - Processing functions.

System configuration changes, other than changes to this setting, should be made within Windows by using applications such as **TOSHIBA HW Setup**, **TOSHIBA Password Utility**, **TOSHIBA Power Saver**, **Windows Device Manager** *and so forth.*

Execute-Disable Bit Capability

This setting, which is displayed on the first page of the setup screen, configures the Execute-Disable Bit function of the computer's processor. This function is specific to Intel® processors and, when activated, helps to reduce security threats to the computer by preventing certain classes of malicious "buffer overflow" attacks when combined with a supporting operating system such as Windows XP.

Available	Makes the processor's Execute-Disable Bit Capability available for use.
Not Available	Disables the processor's Execute-Disable Bit Capability so that it is not available for use. (Default).

System configuration changes, other than changes to this setting, should be made within Windows by using applications such as **TOSHIBA HW Setup**, **TOSHIBA Password Utility**, **TOSHIBA Power Saver**, **Windows Device Manager** *and so forth.*

Virtualization Technology

Virtualization Technology sets enable or disable of the Intel Virtualization Technology installed in the CPU.

Intel Virtualization Technology is the technique that allows one machine to operate as multiple virtual machines.

The Virtualization Technology is supported with some models.

The Disabled command does not allow use of the Intel Virtualization Technology.

The Enabled command allows use of the Intel Virtualization Technology.

Enabled	Enables Virtualization Technology.
Disabled	Disables Virtualization Technology (Default).

System configuration changes, other than changes to this setting, should be made within Windows by using applications such as **TOSHIBA HW Setup**, **TOSHIBA Password Utility**, **TOSHIBA Power Saver**, **Windows Device Manager** *and so forth.*

Chapter 8

Using the Remote Controller, Front operation panel and QosmioPlayer

This chapter explains how to use the Remote Controller as well as provides information about QosmioPlayer.

- *Please refer to the included Qosmio HD DVD Guide for more information on using the HD DVD-ROM drive model.*
- *The state where Windows XP is active is referred to as Windows mode, whereas the state where QosmioPlayer is active is referred to as QosmioPlayer mode.*

Windows XP Media Center Edition

- *My TV is part of Media Center. Do not install other TV viewing software such as WinDVR. If installed, it will not operate.*
- *Do not use InterVideo WinDVD® Creator2 while watching a TV program or recording a TV program on Media Center. If you change TV channels on InterVideo WinDVD Creator2, the channel on Media Center will also change.*
- *You can record TV programs and pictures/movies from external input devices using the TV tuner. To do this, please use the recommended software below:*
  To record TV programs:
  - *Windows XP Media Center Edition*

  To record pictures/movies from external input devices:
  - *Windows XP Media Center Edition*
  - *InterVideo WinDVD Creator 2 Platinum*

  You cannot use **Windows Movie Maker** *or any other software for this purpose.*

Windows XP Media Center Edition has the following function.

- Watch TV or a DVD movie.
- Pause, rewind, and fast forward TV programs using the Media Center time shifting feature.
- Watch an instant replay.
- Play back your digital videos.
- View your digital pictures, or play them as a slide show.
- Browse, select, and play music CDs and DVD movies.
- Update the Television Program Guide from the Internet.

When the Media Center is going to be used, be sure that the computer is hooked up to an AC adaptor, and please use the AC power. If this is used under battery power, you are in danger of experiencing recording failures, sound fades, or frames being dropped from videos due to battery depletion.

For more information, refer to the manual in the Microsoft® Windows® XP Media Center Edition.

Front operation panel

This section describes the buttons of the front operation panel in Windows mode.

Please do not press the buttons too strenuously.

Eleven buttons are available for use:

TV, CD/DVD, Play/Pause, Stop, Previous, Next, Record, Brightness down, Brightness up, DOLBY, TV-out.

These buttons allow you to manage Audio/Video functions, run applications and access utilities.

Front operation pane

TV button	Starts Media Center and My TV.
CD/DVD button	Pressing this button will launch an application program that allows you to watch a DVD or listen to a CD. Pressing this button while the computer is on or in Standby Mode, will launch Media Center. My Music is started when a music CD is inserted in the optical disc drive and My Video is started when a DVD video is in the drive.

	Play/Pause button	In Media Center, this button allows you to play/pause chapters or tracks.
	STOP button	Press this button to stop playing a track or chapter in Media Center.
	Previous button	Press this button to move to the previous audio track, DVD chapter or recorded data in Media Center.
	Next button	Press this button to move to the next audio track, DVD chapter or recorded data in Media Center.
	Record button	Pressing this button when Windows starts to display Manual Recording while using Live TV in Media Center. The button setting can be changed in TOSHIBA Controls properties. To access the TOSHIBA Controls properties, click **start**, click the **Control Panel**, click **Printers and the Software** and select the **TOSHIBA Controls** icon.
	Brightness down button	Pressing this button to decrease the brightness of the built-in LCD. The button's setting can be changed in TOSHIBA Controls properties. To access the TOSHIBA Controls properties, click **start**, click the **Control Panel**, click **Printers and the Software** and select the **TOSHIBA Controls** icon.
	Brightness up button	Pressing this button to increase the brightness of the built-in LCD. The button's setting can be changed in TOSHIBA Controls properties. To access the TOSHIBA Controls properties, click **start**, click the **Control Panel**, click **Printers and the Software** and select the **TOSHIBA Controls** icon.
	DOLBY button	Pressing this button to display the dialog for using the functions of Dolby® Home Theater which contains Dolby®. For more information on using Dolby, refer to its help which is displayed on clicking the **F1** key on the Dolby dialog. The button's setting can be changed in TOSHIBA Controls properties. To access the TOSHIBA Controls properties, click **start**, click the **Control Panel**, click **Printers and the Software** and select the **TOSHIBA Controls** icon.

TV-out button	Pressing this button while Windows is running will switch the display output to a TV. The button's setting can be changed in TOSHIBA Controls properties. To access the TOSHIBA Controls properties, click **start**, click the **Control Panel**, click **Printers and the Software** and select the **TOSHIBA Controls** icon.

		Windows Media Center Edition		
Icon	Front operation panel	Media Center - My TV (TV)	Media Center - Play DVD (DVD)	Media Center - My Music (CD)
	TV	Run Media Center and start My TV	-	-
	CD/DVD	-	Run Media Center and play DVD	Run Media Center and start My Music
▶/❚❚	Play/Pause	-	Play/Pause	Play/Pause
■	Stop	-	Stop	Stop
⏮	Previous	-	Previous chapter	Previous track
⏭	Next	-	Next chapter	Next track
●	Rec	Start Recording	-	-
▼☼	Brightness (-)	Changes the brightness level of LCD; 8->7->···2->1		
▲☼	Brightness (+)	Changes the brightness level of LCD; 1->2->···7->8		
DOLBY	DOLBY	Open the Dolby dialog box		
	TV-out	Switch the display output to TV		

Remote Controller

Your computer includes a TV Remote Controller which enables you to perform some functions of your computer from a distant location.

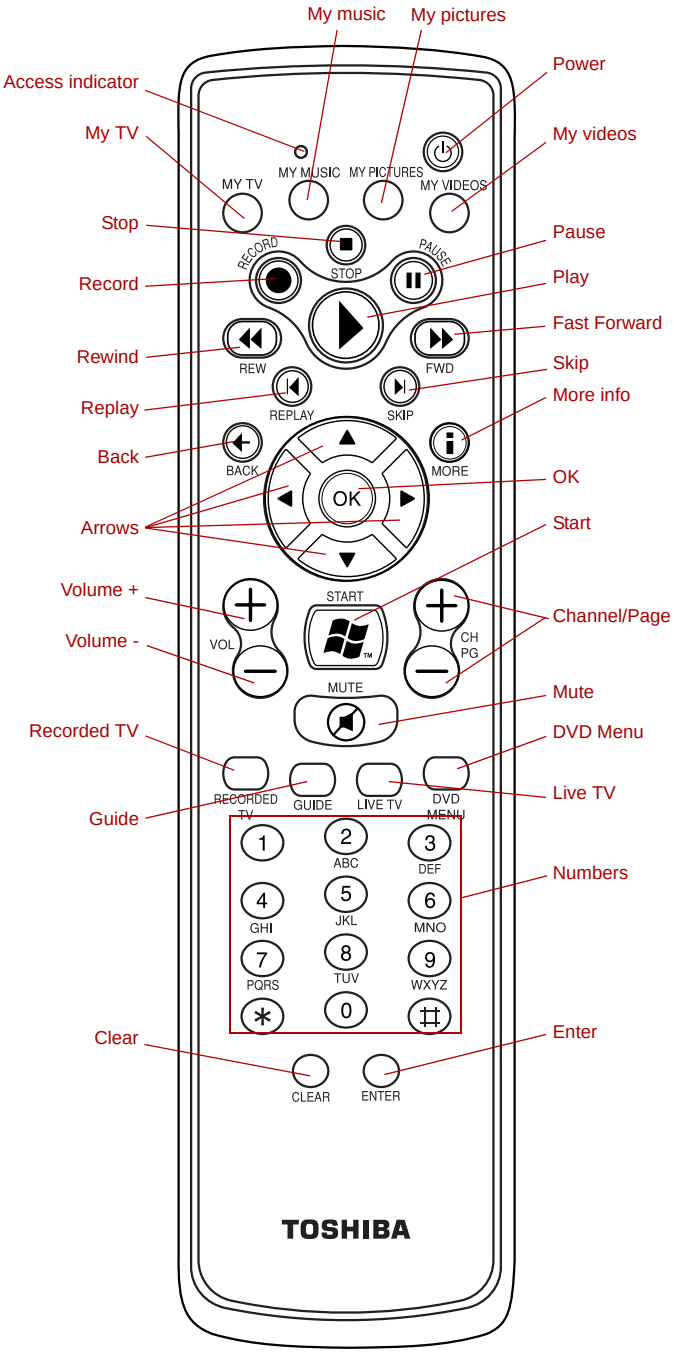
The following figure shows the buttons on the Remote Controller.

You can use your Remote Controller with Media Center to play CDs, DVDs and videos, to view pictures and to watch and record television programs.

The Remote Controller helps you navigate through Media Center just as a cable TV remote control navigates cable TV options or controls the playback of a movie in a VCR or DVD player.
Using the Remote Controller, you can:

- Navigate and control all Media Center windows.
- Control the video or live TV display.
- Place the computer in and out of Standby Mode.

Refer to the *Using the Remote Controller* section in this chapter for information on how to use the Remote Controller as well as how to install and remove its batteries.



Remote Controller

Power	Starts or terminates the operating system. This button functions like the Power button of your computer. By default, the Standby Mode is equivalent to the Power Off state of your computer. To change the setting, click **start**, select **Control panel** -> **Performance and Maintenance** -> **TOSHIBA Power Saver** -> **Setup Action** -> **Manual Setup**. The following five options are available: No action, Ask me what to do, Standby, Hibernate and Shut down.
Access indicator	This indicator will glow while the Remote Controller is sending signals to the computer. Please note that this indicator will not light after the battery has been completely discharged.
My TV	The My TV menu screen is displayed. When the Media Center is not activated, start it up and the menu screen will be displayed.
My music	The My music menu screen is displayed. When the Media Center is not activated, it is started up and the menu screen is displayed.
My pictures	The My pictures menu screen is displayed. When the Media Center is not activated, it is started up and the menu screen is displayed.
My videos	The My videos menu screen is displayed. When the Media Center is not activated, it is started up and the menu screen is displayed.
Record	Records the selected television program and stores it on your hand disk drive.
Stop	Stops the media currently playing.
Pause	Pauses an audio or video track, and live or recorded TV programs.
Play	Plays the selected media.
REW (Rewind)	Moves the media (video, DVD, music, and so on) backwards.
FWD (Fast Forward)	Moves the media (video, DVD, music, and so on) forwards.

Replay	Moves media backward (seven seconds for videos and live TV, one music track or one DVD chapter at a time).
Skip	Moves media forward (30 seconds for videos and live TV, one music track or one DVD chapter).
Back	Displays the previous window.
More Info	The button provides more details on a TV program than is listed in the Guide.
Arrows	Moves the cursor to navigate within Media Center windows.
OK	Selects the desired action or window option. It acts like the **Enter** Key. If watching TV in full screen mode, pressing **OK** switches back to the previous viewed channel. Press again to toggle back. It acts the same way as a Jump button on some TV remote controls.
Volume +	Increases the volume while watching TV, viewing DVD's or replaying CD's.
Volume -	Decreases the volume while watching TV, viewing DVD's or replaying CD's.
Start	Opens Media Center to the main window.
Channel/Page up(+) and down(-)	Changes the TV channel or moves a page up and down, depending on the available options.
Mute	Turns your computer sound off.
Recorded TV	Allows you to start recording of TV programs. The Recorded TV feature of Media Center Edition will be activated.
Guide	Opens the Television Program Guide to display available TV channels and programs to watch and record.
Live TV	A shortcut to the full screen view. It also takes you to the current point in a live TV program after pausing live TV.
DVD Menu	Opens the main menu on a DVD movie, if available.

Numbers	Allows you to select a channel or chapter number while watching TV, or CD/DVD replay. Numbers, letters or symbols can be entered. To select a channel or chapter number of two or more digits, press the buttons sequentially. For example, press the “1” button and then the “0” button to select the number 10.
Clear	Deletes entered numbers, letters or symbols.
Enter	The OK button on the Remote Controller has the same functions.

Using the Remote Controller

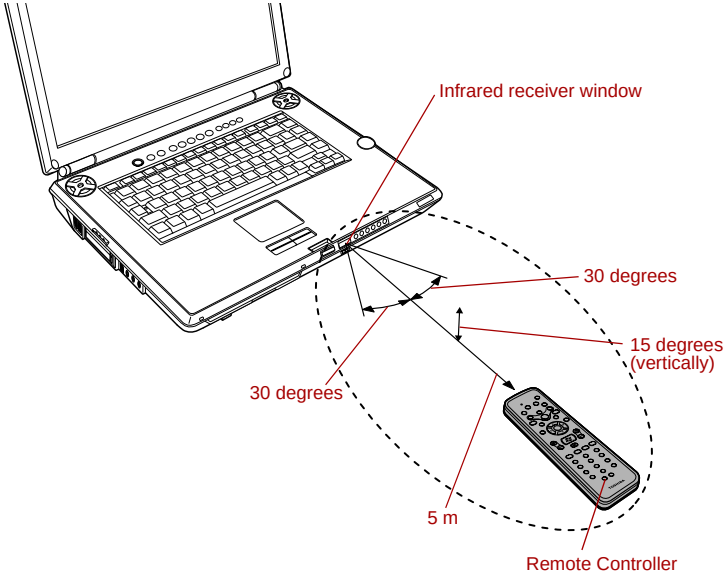
This computer includes a remote control unit, which allows you to control some of your computer’s functions from a distant location.

- *The Remote Controller is designed specifically for this computer.*
- *Some application programs may not support remote control functions.*

Operational range of the Remote Controller

Point the Remote controller at your computer and press a button. The operational angle and distance are described below.

Distance	Within 5 m from the infrared receiver window.
Angle	Within about 30 degrees horizontally and about 15 degrees vertically of perpendicular to the infrared receiver window.



Operational range of the remote control

* The appearance of the provided Remote Controller may vary from model to model, and it is not provided with some models.

Even if within the effective scope as described above, the remote control may malfunction or not work correctly in the following cases.

- *When an obstacle stands between the infrared receiver window of your computer and the Remote Controller.*
- *When direct sunlight or strong fluorescent light strikes the infrared receiver window.*
- *When the infrared receiver window or the infrared emission part of the Remote Controller is dirty.*
- *When other computers which use an infrared remote controller are used near to your computer.*
- *When a low battery condition is present*

Installing/Removing batteries

Be sure to install the dry batteries provided with this product before using the Remote Controller.

The procedures for installing and removing the batteries vary depending on the type of the Remote Controller. Check the type and then install or remove the batteries as instructed.

Store the battery for the remote control beyond the reach of children.

If a child swallows a battery, this might result in choking. If it happens, contact a doctor immediately.

Observe the following precautions when using the battery of the Remote Controller.

- *Do not use batteries other than those specified.*
- *Ensure that you insert the batteries with their polarities correctly aligned (+ or -).*
- *Do not recharge, heat, disassemble or short the battery, or put it into a fire or flame.*
- *Do not use a battery whose "recommended expiration date" has been reached, or which is completely discharged.*
- *Do not use different types of batteries or old and new batteries at the same time.*
- *Do not carry the battery together with metal necklaces, hairpins or other metal accessories.*
- *When storing or disposing of used batteries, make sure to put some insulation tape on their terminals (+ and -) to avoid short-circuits.*

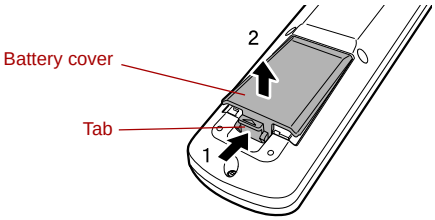
If these precautions are not followed, heating, fluid leakage or explosion may occur. This may cause burns or personal injury. If battery fluid gets on your skin or clothes, wash immediately with clean water. If battery fluid gets in your eyes, rinse your eyes with clean water immediately and see a doctor. Do not touch the battery fluid on instruments or devices with bare hands. Wipe off with a cloth or paper towel.

Type of battery that can be used for the Remote Controller

When the batteries shipped with the Remote Controller are discharged, replace them with commercially available AA manganese batteries or AA alkaline batteries. Other types or battery should not be used.

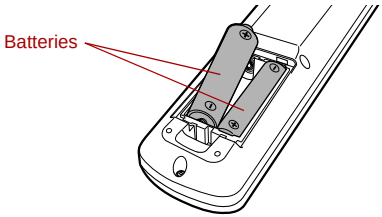
Installing the batteries

1. Open the battery cover on the back side of the Remote Controller.
   Push the tab in the direction of the arrow (1) to open the cover (2).



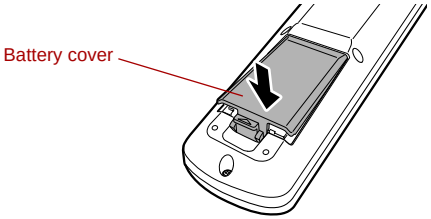
Opening the battery cover

2. Insert the batteries in place.
   Be sure to place the batteries with their polarities (+ and -) in the correct position.



Inserting the batteries

3. Close the battery cover.
   Close the cover securely until it clicks.

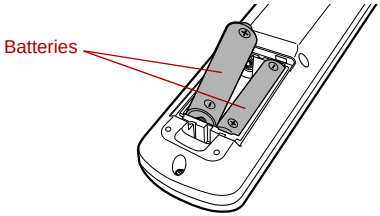


Closing the battery cover

Replacing the batteries

When the batteries in the Remote Controller reach the end of their life, the Remote Controller may not operate correctly or work only within a short distance from your computer. In this instance, you should purchase new batteries and replace the discharged ones.

1. Open the battery cover on the back side of the Remote Controller.
2. Replace the batteries.
   Be sure to place the batteries with their polarities (+ and -) in the correct position.



Removing the batteries

3. Close the battery cover.
   Close the cover securely until it clicks.

Watching TV

Activating Media Center for the first time

1. Activate Media Center.
   The setup screen appears. Configure settings according to your environment.

Follow the screen instructions and configure settings according to the environment used.

Changing settings

Refer to the following procedures to change settings that are already configured.

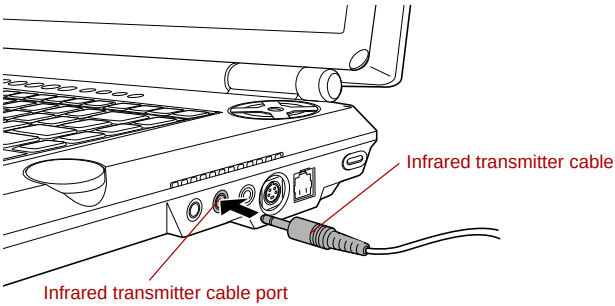
1. Activate Media Center.
2. Click in the following order: click **Settings**, click **TV** and then click **Set Up TV Signal**.
3. Click **Yes** for the **TV SIGNAL SETUP** message.
4. Follow the screen instructions and configure settings according to the environment used.

Image data cannot be imported, edited, watched or saved to DVD by connecting the Media Center Edition model to external devices such as TV, video deck or analog video camera.

Connecting the set-top box

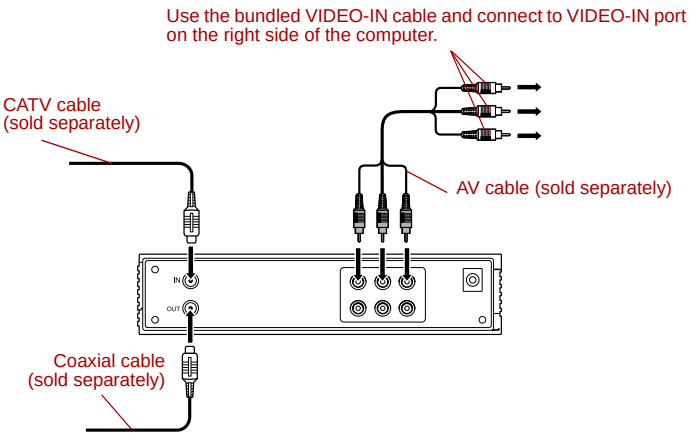
To connect an infrared transmitter cable, follow the steps as detailed below:

1. Connect the infrared transmitter cable to the computer. Please note that the infrared remote control for your set-top box must be compatible in order to function.



Connecting the infrared transmitter cable

2. Connect the VIDEO-IN cable that is bundled with the computer.
3. Insert the output cable plug for connecting to the set-top box to the audio input terminals (red: audio right, white: audio left) and the video input connector (yellow) of the VIDEO-IN cable.
4. Connect the other end of the output cable plug to the output terminals of the set-top box.


Use the bundled VIDEO-IN cable and connect to VIDEO-IN port on the right side of the computer.
CATV cable (sold separately)
AV cable (sold separately)
IN
OUT
Coaxial cable (sold separately)

Connection method for the computer and set-top box in MCE model

Starting to watch TV

Perform the following procedures to watch TV.

1. Activate Media Center.
2. Activate MV TV.

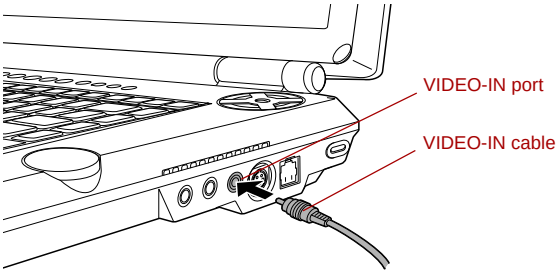
For details on operating method, refer to the Help in Media Center.

Image data cannot be imported, edited, watched or saved to DVD by connecting the Media Center Edition model to external devices such as TV, video deck or analog video camera.

Connecting the VIDEO-IN port

This port allows you to import video data from analog video cameras or video decks by connecting your computer to this type of device. Imported video can be edited or written to a DVD disk.

1. Insert one end of the VIDEO-IN cable into the VIDEO-IN port of your computer.



Connecting the VIDEO-IN port

2. Insert the other end of the VIDEO-IN cable into the output port of the analog device you wish to connect. To hear sounds, use a video cable to connect the sound terminals of the audio device and your computer (red: sound, right channel, white: sound, left channel).

- *When playing a DVD video with recorded data from the TV on Play DVD in the Media Center, pushing the Skip button on the Remote Controller while the last chapter is playing may result in the Media Center freezing.*
  If this occurs, end ehshell.exe from the process tab in task manager.
- *If you connect an external monitor to your computer while using Media Center to view a DVD movie in full-screen mode, the monitor display will go blank if either of the following situations occurs:*

  (Situation A)

  1. Connect the external monitor to your computer

  2. Enter Hibernation mode

  3. Resume from Hibernation mode

  or

  (Situation B)

  1. Enter Hibernation mode

  2. Connect the external monitor to your computer

  3. Resume from Hibernation mode

  If either situation occurs, do one of following to refresh the external monitor:

  (a) Press the Windows button on the keyboard or the remote control.

  (b) Press the Alt and Enter keys simultaneously to change Media Center to Windows mode.

QosmioPlayer

QosmioPlayer is a quick play feature that enables users to perform TV, DVD and CD playback, as well as AV input (image and voice data) without using Windows.
To use the QosmioPlayer feature, some settings must be specified. For more information on how to configure, refer to the chapter on the QosmioPlayer Setting in the User's Manual.

Front operation panel

This section describes the buttons of the front operation panel for QosmioPlayer mode.

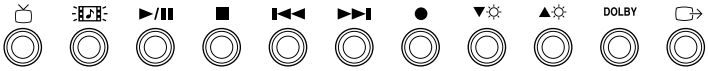
Please do not press the buttons too strenuously.

QosmioPlayer mode

Nine buttons are available for use:
TV, CD/DVD, Play/Pause, Stop, Previous, Next, Record, Brightness down, Brightness up.

The QosmioPlayer mode does not support the DOLBY button and the TV-out button.

These buttons allow you to manage Audio/Video functions, run applications and access utilities.



Front operation panel

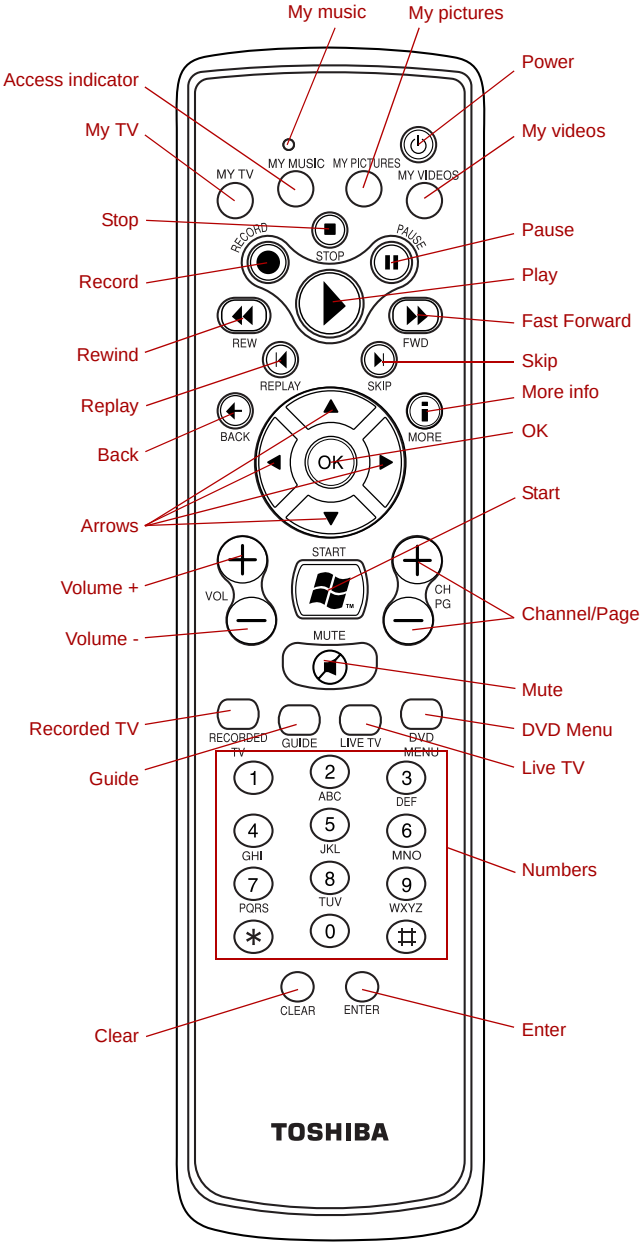
Refer to the Front operation panel in the *Front operation panel* section of this Chapter.

Function comparison list for TV/DVD/CD software

		QosmioPlayer mode	
Icon	Front operation panel	QosmioPlayer (TV)	QosmioPlayer (CD/DVD)
	TV	Activate TV application	Terminate (CD/DVD) Start (TV)
	CD/DVD	Terminate (TV) Start (CD/DVD)	Detect and activate media
►/❚❚	Play/Pause	Play/Pause	Play/Pause
■	Stop	Stop	Stop
	Previous	Previous Page (Library only)	Previous track/chapter
	Next	Following Page (Library only)	Next track/chapter
●	Rec	Record	-
	Brightness (-)	Changes the brightness level of LCD; 8->7->⋯2->1	
	Brightness (+)	Changes the brightness level of LCD; 1->2->⋯7->8	
DOLBY	DOLBY	-	-
	TV-out	-	-

Remote Controller

You can use your Remote Controller with QosmioPlayer to play CDs, DVDs and videos, to view pictures and to watch and record television programs.



Remote Controller

Power	Starts or terminates the operating system. This button functions like the Power button of your computer. By default, the Standby Mode is equivalent to the Power Off state of your computer. To change the setting, click **start**, select **Control panel** -> **Performance and Maintenance** -> **TOSHIBA Power Saver** -> **Setup Action** -> **Manual Setup**. The following five options are available: No action, Ask me what to do, Standby, Hibernate and Shut down.
Access indicator	This indicator will glow while the remote control is sending signals to the computer. Please note that this indicator will not light after the battery has been completely discharged.
My TV	The My TV menu screen is displayed. When the Media Center is not activated, start it up and the menu screen will be displayed.
My music	The My music menu screen is displayed. When the Media Center is not activated, it is started up and the menu screen is displayed.
My pictures	The My pictures menu screen is displayed. When the Media Center is not activated, it is started up and the menu screen is displayed.
My videos	The My videos menu screen is displayed. When the Media Center is not activated, it is started and the menu screen is displayed.
Record	Records the selected television program and stores it on your hand disk.
Stop	Stops the media currently playing.
Pause	Pauses an audio or video track, and live or recorded TV programs.
Play	Plays the selected media.
REW (Rewind)	Moves the media (video, DVD, music, and so on) backwards.
FWD (Fast Forward)	Moves the media (video, DVD, music, and so on) forwards.
Replay	Moves media backward (seven seconds for videos and live TV, one music track or one DVD chapter at a time).

Skip	Moves media forward (30 seconds for videos and live TV, one music track or one DVD chapter).
Back	Displays the previous window.
More Info	The button provides more details on a TV program than is listed in the Guide.
Arrows	Moves the cursor to navigate within Media Center windows.
OK	Selects the desired action or window option. It acts like the **Enter** Key. If watching TV in full screen mode, pressing **OK** switches back to the previous viewed channel. Press again to toggle back. It acts the same way as a Jump button on some TV remote controls.
Volume +	Increases the volume while watching TV, viewing DVD's or replaying CD's.
Volume -	Decreases the volume while watching TV, viewing DVD's or replaying CD's.
Start	Opens Media Center to the main window.
Channel/Page up(+) and down(-)	Changes the TV channel or moves a page up and down, depending on the available options.
Mute	Turns your computer sound off.
Recorded TV	Allows you to start recording of TV programs. The Recorded TV feature of Media Center Edition will be activated.
Guide	Opens the Television Program Guide to display available TV channels and programs to watch and record.
Live TV	A shortcut to the full screen view. It also takes you to the current point in a live TV program after pausing live TV.
DVD Menu	Opens the main menu on a DVD movie, if available.

Numbers	Allows you to select a channel or chapter number while watching TV, or CD/DVD replay. Numbers can be entered. To select a channel or chapter number of two or more digits, press the buttons sequentially. For example, press the “1” button and then the “0” button to select the number 10.
Clear	Deletes entered numbers.
Enter	The OK button on the Remote Controller has the same functions.

Functions via the Remote Controller and the keyboard in the QosmioPlayer mode

The list shows how the functions available from the keyboard correspond to those available from the Remote Controller in the QosmioPlayer mode. Note that some functions of the Remote Controller in the list may not be supported by the Remote Controller you are using. Check the model and specifications of your Remote Controller before use.

Remote Controller	Computer	QosmioPlayer (TV)	QosmioPlayer (CD)	QosmioPlayer (DVD)
Power	Power button	Terminate QosmioPlayer (TV)	Terminate QosmioPlayer (CD)	Terminate QosmioPlayer (DVD)
My TV		-	-	-
My Music		-	-	-
My Pictures		-	-	-
My Videos		-	-	-
STOP ■	Ctrl + Space	Stop	Stop	Stop
RECORD ●	Ctrl + R	Record	-	-
PAUSE ❚❚	Space	Pause	Pause	Pause
PLAY ▶	Space	Play	Play	Play
REW ◀◀	< or O	Rewind quickly	Rewind by about 10 seconds	Rewind quickly
FWD ▶▶	> or P	Forward quickly	Skip by about 10 seconds	Forward quickly
REPLAY |◀	K	Previous Page (Library only)	Previous track	Previous chapter
SKIP ▶|	L	Following Page (Library only)	Next track	Next chapter

BACK	Esc	Menu cancel or hides	-	Menu cancel or back or return
MORE	D	Change the channel display mode	Change the CD playback time display mode	Change the status display mode
UP		Move the cursor	-	Move the cursor
DOWN		Move the cursor	-	Move the cursor
RIGHT		Move the cursor	-	Move the cursor
LEFT		Move the cursor	-	Move the cursor
OK	Enter	Execute the selected option	Execute the selected music	Execute the selected option
VOL + (Volume)	Ctrl +	Increase the volume	Increase the volume	Increase the volume
VOL - (Volume)	Ctrl +	Decrease the volume	Decrease the volume	Decrease the volume
START		-	-	-
CH + (Channel)	PgUp	Next channel	-	-
CH - (Channel)	PgDn	Previous channel	-	-
MUTE	M	Mute the volume	Mute the volume	Mute the volume
RECORDED TV	F9 or TAB	Displays or hides the Library	-	-
GUIDE	F1	Display the guide	Display the guide	Display the guide

LIVE TV	F10	Start QosmioPlayer (TV)	Terminate QosmioPlayer (CD) -> Start QosmioPlayer (TV)	Terminate QosmioPlayer (DVD) -> Start QosmioPlayer (TV)
DVD MENU	F8	-	-	Displays the top menu
DVD MENU	F11	Terminate QosmioPlayer (TV) -> Start QosmioPlayer (CD)/QosmioPlayer (DVD)	Start QosmioPlayer (CD)	Start QosmioPlayer (DVD)
1*1	1	Select channel 1	Select track 1	Select chapter 1
2*1	2	Select channel 2	Select track 2	Select chapter 2
3*1	3	Select channel 3	Select track 3	Select chapter 3
4*1	4	Select channel 4	Select track 4	Select chapter 4
5*1	5	Select channel 5	Select track 5	Select chapter 5
6*1	6	Select channel 6	Select track 6	Select chapter 6
7*1	7	Select channel 7	Select track 7	Select chapter 7
8*1	8	Select channel 8	Select track 8	Select chapter 8
9*1	9	Select channel 9	Select track 9	Select chapter 9
0*1	0	Normally functions as 0	Normally functions as 0	Normally functions as 0
*		-	-	-
#	Ctrl + T	Start/Stop a Time Shifting functions	-	-
CLEAR		-	-	-
ENTER		-	-	-

-	F7 Fn + F7	LCD Brightness up	LCD Brightness up	LCD Brightness up
-	I	Switch TV/Line	-	-
-	F6 Fn + F6	LCD Brightness Down	LCD Brightness Down	LCD Brightness Down
-	F2	Display/Do Not Display Settings Menu	-	Display/Do Not Display Settings Menu
-	Ctrl + K	Go back 10 seconds	-	Go back 10 seconds
-	Ctrl + L	Skip after 30 seconds	-	Skip after 30 seconds
-	T	-	-	Select title
-	G	-	-	Angle
-	S	-	-	Subtitle
-	A	Change the Audio Multiplex	-	Language Change
-	Y	Slow Play	-	Slow Play
-	E	Remove Disk	Remove Disk	Remove Disk
-	Ctrl + R	-	One Song Repeat/Disk Repeat	-
-	Ctrl + S	-	Shuffle Repeat	-
-	V	Display Version (Settings Menu only)	Display Version	Display Version (Settings Menu only)
-	DEL	Delete Title (Library only)	-	-
-	F9	-	-	Display Menu
-	W	Adjust the screen size	-	-

* 1 When entering more than 2 digits press the buttons without pausing.

List of language codes

When inputting the QosmioPlayer language codes, refer to the list shown below.

Code	English Name of Language	Code	English Name of Language
AA	Afar	EL	Modern Greek
AB	Abkhazian	EN	English
AF	Afrikaans	EO	Esperanto
AM	Amharic; Abyssinian	ES	Spanish; Castilian
AR	Arabic	ET	Estonian
AS	Assamese	EU	Basque
AY	Aymara	FA	Farsi; Persian
AZ	Azerbaijani	FI	Finnish
BA	Bashkir	FJ	Fijiian
BE	Belarusian; Byelorussian	FO	Faroese; Faeroese
BG	Bulgarian	FR	French
BH	Bihari	FY	Frisian
BI	Bislama	GA	Irish
BN	Bengali; Bangla	GD	Gaelic; Scottish Gaelic; Gaelic (Scots)
BO	Tibetan	GL	Galician; Gallegan
BR	Breton	GN	Guarani
CA	Catalan	GU	Gujarati
CO	Corsican	HA	Hausa
CS	Czech	HI	Hindi
CY	Welsh	HR	Croatian
DA	Danish	HU	Hungarian
DE	German	HY	Armenian
DZ	Dzongkha; Bhutani; Butanese	IA	Interlingua

Code	English Name of Language	Code	English Name of Language
IE	Interlingue	MI	Maori
IK	Inupiaq	MK	Macedonian
IN	Indonesian	ML	Malayalam
IS	Icelandic	MN	Mongolian
IT	Italian	MO	Moldavian
IW	Hebrew	MR	Marathi
JA	Japanese	MS	Malay
JI	Yiddish	MT	Maltese
JW	Javanese	MY	Myanmar; Burmese
KA	Georgian	NA	Nauruan
KK	Kazakh	NE	Nepali
KL	Greenlandic; Kalaallisut	NL	Dutch
KM	Khmer; Cambodian	NO	Norwegian
KN	Kannada	OC	Occitan; Provencal
KO	Korean	OM	Oromo; Afan Oromo; Galla
KS	Kashmiri	OR	Oriya
KU	Kurdish	PA	Punjabi; Panjabi
KY	Kyrgyz; Kirghiz	PL	Polish
LA	Latin	PS	Pashto; Pushto
LN	Lingala	PT	Portuguese
LO	Laotian; Lao	QU	Quechua
LT	Lithuanian	RM	Rhaeto-Romance
LV	Latvian; Lettish	RN	Kirundi; Rundi
MG	Malagasy	RO	Romanian

Code	English Name of Language	Code	English Name of Language
RU	Russian	TG	Tajiki
RW	Kinyarwanda; Rwanda	TH	Thai
SA	Sanskrit	TI	Tigrinya
SD	Sindhi	TK	Turkmen
SG	Sangho	TL	Tagalog
SH	Serbo-Croatian	TN	Setswana; Tswana
SI	Sinhalese; Singhalese	TO	Tonga
SK	Slovak	TR	Turkish
SL	Slovenian	TS	Tsonga
SM	Samoan	TT	Tatar
SN	Shona; Chishona	TW	Twi; Tshi
SO	Somali	UK	Ukrainian
SQ	Albanian	UR	Urdu
SR	Serbian	UZ	Uzbek
SS	Swazi; Swati; Siswati	VI	Vietnamese
ST	Sesotho; Southern Sotho	VO	Volapuk
SU	Sudanese	WO	Wolof
SV	Swedish	XH	Xhosa
SW	Swahili; Kiswahili	YO	Yoruba
TA	Tamil	ZH	Chinese
TE	Telugu	ZU	Zulu

QosmioEngine

Users can select from three video quality modes depending on their preferences for watching videos. A dedicated utility (TOSHIBA Picture Enhancement Utility) running on Windows is developed to allow users to select a mode and a sharpness level.

Modes

There are the following three modes.

- Dynamic: Users can enjoy videos in a bright and exciting way.
- Standard: Users can enjoy videos in their room in a relaxed way.
- Theater: Users can enjoy videos as if they were in a theater in their dimly-lit room.

Two sharpness levels are available: ON and OFF, with the Image sharpness being emphasized if ON is selected.

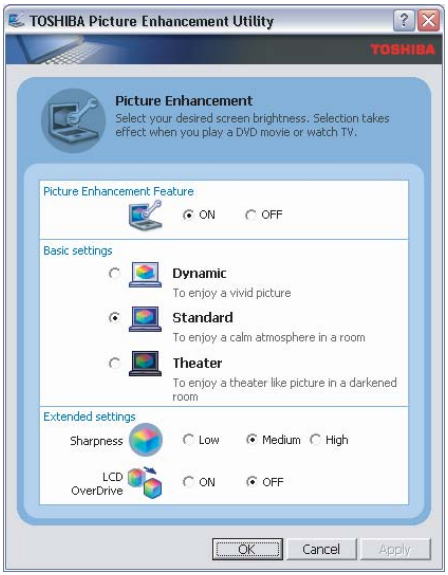
Restrictions of the QosmioEngine

The current mode will be maintained, and should be restored the next time the computer is switched on, and after the computer returns from Standby Mode or Hibernation Mode.

QosmioEngine is available only for the LCD and has the following restrictions.

- *QosmioEngine does not support LCD/CRT, CRT, TV, LCD/TV and Multi-Monitor.*
- *Depending the video being played, noise may be present.*
- *The QosmioEngine is active when using the WinDVD.*
- *The QosmioEngine is active when using the QosmioPlayer TV or the QosmioPlayer DVD.*
- *QosmioEngine is also compatible with WinDVD.*
- *External display output (CRT/S-Video out) may not be supported.*
- *The QosmioEngine allows the computer to clearly display video images, while trading this off against the rendering of lower quality static data, such as captions.*
- *Noise contained in original video images may increase when playing them with QosmioPlayer. This is because the QosmioEngine not only displays video images in high quality but will also do the same for any noise they may contain.*

TOSHIBA Picture Enhancement Utility on nVIDIA GeForce Go 7600 model (Is pre-installed with some models)



TOSHIBA Picture Enhancement Utility

Available image quality modes

Three image quality modes are available

Dynamic: To enjoy a vivid picture

Standard: To enjoy a calm atmosphere in a room

Theater: To enjoy a theater like picture in a darkened room

Available sharpness levels

Three sharpness levels are available: Low, Medium, High

Image sharpness is emphasized if a higher level is chosen.

This function is available Microsoft® Windows® XP Media Center Edition or InterVideo WinDVD.

About LCD Overdrive

LCD Overdrive reduces the afterimage that can occur in moving pictures.

This function is available only for NTSC.

This function is available InterVideo WinDVD.

Chapter 9

Optional Devices

Optional devices can expand the computer's capabilities and its versatility. This chapter describes the connection or installation of the following devices which should be available from your reseller or TOSHIBA dealer:

Cards/memory

- PC Card
- ExpressCard
- Bridge media slot
  - SD Card (SD, SD-IO, Mini-SD with Adapter)
  - Memory Stick/Memory Stick Pro
  - xD picture card
  - MultiMediaCard
- Memory expansion

Power devices

- Battery packs
- Universal AC Adaptor
- Battery Charger

Peripheral devices

- Hard disk drive pack
- USB floppy disk drive
- External monitor
- TV
- HDMI
- S-Video-in
- i.LINK (IEEE1394)
- Bluetooth USB Adaptor
- Bluetooth Wireless Mouse
- Bluetooth Wireless Stereo

- Bluetooth 2.0+EDR Module Kit

Other

- Security lock

PC Card

The computer is equipped with a single PC Card slot that can accommodate a Type II format card. Any PC Card that meets industry standards, either manufactured by TOSHIBA or another vendor, can be installed as the slot supports 16-bit PC Cards and 32-bit CardBus cards. For reference, CardBus supports the newer standard of 32-bit PC Cards and provides superior performance for the greater demands of applications such as multimedia data transmission.

PC Cards can sometimes become hot during computer operation. Before you remove a PC Card always wait for it to cool. You could get burned removing a hot PC Card.

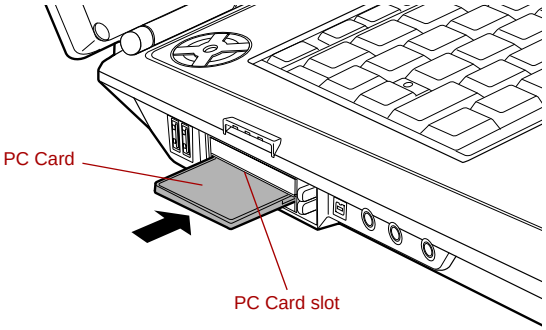
Inserting a PC Card

The Windows hot-install feature allows you to insert PC Cards while the computer is switched on.

Do not insert a PC Card while the computer is in Standby Mode or Hibernation Mode as you may find that some cards do not work properly.

To insert a PC Card, follow the steps as detailed below:

1. Insert the PC Card into the PC Card slot on the side of the computer.
2. Press the PC Card gently to ensure a firm connection is made.



Inserting the PC Card

3. After inserting the PC Card you should refer to its documentation and also check the configuration in Windows in order to ensure that it is correct.

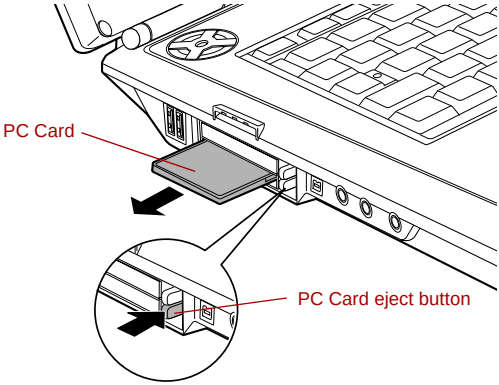
Removing a PC Card

To remove a PC Card, follow the steps as detailed below:

1. Open the **Safely Remove Hardware** icon on the Windows Task Bar.
2. Point to **PC Card** and click the left Touch Pad control button.
3. Press the PC Card eject button to partially extend it out of the computer.

If the PC Card is not inserted all the way into the computer, the eject button may not cause it to pop out sufficiently to allows it to be grasped. In this instance, simply push the PC Card firmly back into the computer and then press the eject button again.

4. Press the extended eject button in order to eject the PC Card partially out of the computer.
5. Grasp the PC Card and remove it.



Removing the PC Card

ExpressCard

The computer is equipped with a single ExpressCard slot into which any ExpressCard device that meets industry standards, either manufactured by TOSHIBA or another vendor, can be installed. The slot supports hot plug connection and utilizes the PCI Express interface that supports the reading and writing of data at a theoretical maximum rate of 2.5Gbps.

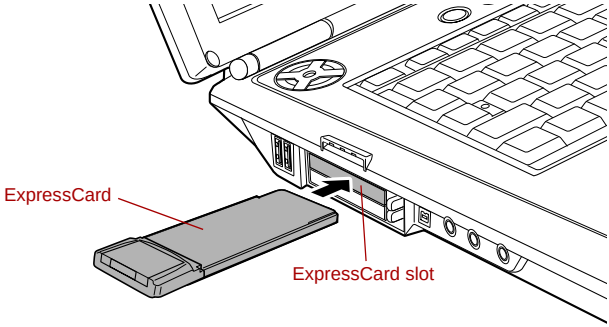
Inserting an ExpressCard

The Windows hot-install feature allows you to insert ExpressCards while the computer is switched on.

- *Do not insert an ExpressCard while the computer is in Standby Mode or Hibernation Mode as you may find that some cards do not work properly.*
- *Please note that the ExpressCard slot is the top one of the two slots located on the left hand side of the computer - please confirm this with the following illustration in order to avoid any confusion with the PC Card slot.*

To insert an ExpressCard, follow the steps as detailed below:

1. Insert the ExpressCard into the ExpressCard slot on the side of the computer.
2. Press the ExpressCard gently to ensure a firm connection is made.



Inserting the ExpressCard

3. After inserting the ExpressCard you should refer to its documentation and also check the configuration in Windows in order to ensure that it is correct.

Removing an ExpressCard

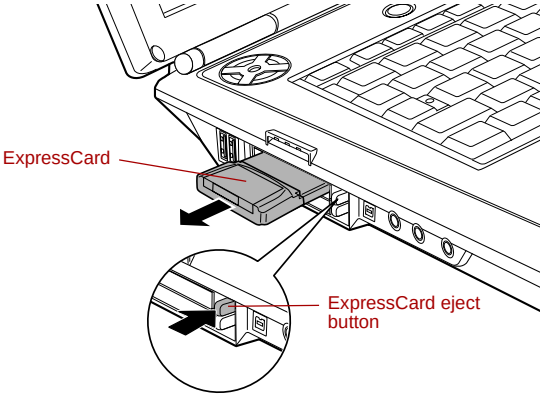
To remove an ExpressCard, follow the steps as detailed below.

1. Open the **Safely Remove Hardware** icon on the Windows Task Bar.
2. Point to **ExpressCard** and click the left Touch Pad control button.
3. Press the ExpressCard eject button to partially extend it out of the computer.

If the ExpressCard is not inserted all the way into the computer, the eject button may not cause it to pop out sufficiently to allows it to be grasped. In this instance, simply push the ExpressCard firmly back into the computer and then press the eject button again.

4. Press the extended eject button in order to eject the ExpressCard partially out of the computer.

5. Grasp the ExpressCard and remove it.



Removing the ExpressCard

Bridge media slot

This slot lets you insert SD Card, SD-IO, MiniSD(with Adapter), Memory Stick (Pro), xD picture card and MultiMediaCard.

This Bridge media slot supports the following cards.

- *SD Card (SD memory card)*
- *SD-IO card*
- *MiniSD with Adapter*
- *Memory Stick*
- *Memory Stick PRO*
- *xD picture card*
- *MultiMediaCard*

Precautions on using cards.

Please note that not all cards have been tested and verified to work correctly. Therefore, it is not possible to guarantee that all cards will operate properly.

SD Card, SD-IO and Mini-SD(with Adapter)

The computer is equipped with a Bridge media slot that can accommodate Secure Digital flash memory cards with various memory capacities so that you can easily transfer data from devices, such as digital cameras and Personal Digital Assistants. SD Cards have a high level of security and copy protection features.

Keep foreign objects out of the Bridge media slot. Never allow metal objects, such as screws, staples and paper clips, to enter the computer or keyboard. Foreign metal objects can create a short circuit, which can cause computer damage and fire, possibly resulting in serious injury.

SD memory cards comply with SDMI (Secure Digital Music Initiative), which is a technology adopted to prevent unlawful copy or playback of digital music. For this reason, you cannot copy or playback protected material on another computer or other device, and you may not reproduce any copyrighted material except for your personal enjoyment.

Formatting an SD memory card

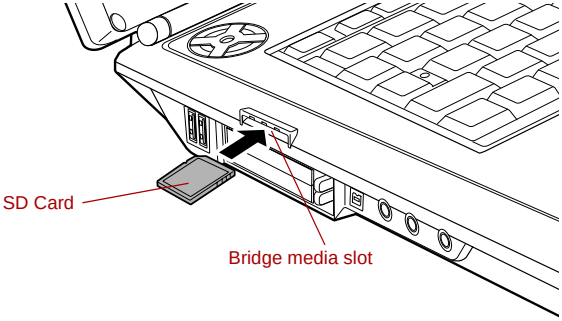
SD memory cards are sold already formatted in conformity to specific standards. If you format the SD Card again, be sure to format it with the TOSHIBA SD Memory Card Format utility, not with the format command provided within Windows.

In order to run the TOSHIBA SD Memory Card Format utility, click **start** followed by **All Programs** followed by **TOSHIBA** followed by **Utilities** and then click **SD Memory Card Format**. Please note that the TOSHIBA SD Memory Card Format utility does not format the protected area of the SD memory card - should you need to format all areas of the memory card, including the protected area, you will need to obtain an appropriate application that applies the copy protection system.

Inserting an SD Card

To insert an SD Card, follow the steps as detailed below:

1. Insert the SD Card into the Bridge media slot on the side of the computer.
2. Press the SD Card gently to ensure a firm connection is made.



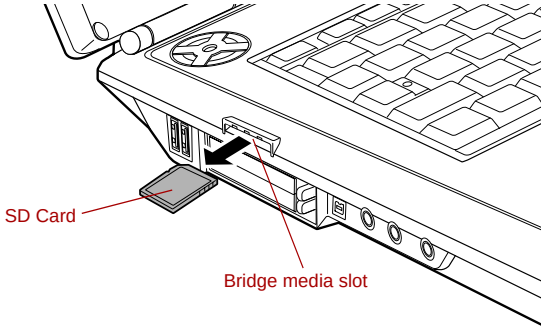
Inserting an SD Card

- *Make sure the SD Card is oriented properly before you insert it.*
- *Make sure that the SD card is facing the correct direction when inserting it into the Bridge media slot.*
- *Do not turn the computer off or switch to Standby Mode or Hibernation Mode while files are being copied - doing so may cause data to be lost.*

Removing an SD Card

To remove an SD Card, follow the steps as detailed below:

1. Open the **Safely Remove Hardware** icon on the Windows Task Bar.
2. Point to **SD Card** and click the left Touch Pad control button.
3. Press the SD Card to partially extend it out of the computer.
4. Grasp the SD Card and remove it.



Removing an SD Card

- *Make sure the* **Media slot** *indicator is out before you remove the SD Card or turn off the computer's power. If you remove the SD Card or turn off the power while the computer is accessing the SD Card you may lose data or damage the card.*
- *Do not remove an SD Card while the computer is in Standby or Hibernation Mode. The computer could become unstable or data in the SD Card could be lost.*

SD Card care

Set the write-protect switch to the lock position, if you do not want to record data.

- Do not write to an SD Card if the computer's battery power is low as this may affect writing accuracy.
- Do not remove an SD Card while a read/write operation is in progress.
- The SD Card is designed so that it can only be inserted into the computer one way - do not try to force the SD Card into the SD Card slot.

- Do not leave an SD Card partially inserted into the slot - press the card until you hear it click into place.
- Do not twist or bend SD Cards.
- Do not expose SD Cards to liquids, store them in humid areas or place them close to containers of liquid.
- After using an SD Card, return it to its case.
- Do not touch the metal part of the SD Card, expose it to liquids or allow it to get dirty.

Memory Stick/Memory Stick Pro

The computer is equipped with a Bridge media slot that can accommodate Memory Stick/Memory Stick Pro flash memory cards with various memory capacities so that you can easily transfer data from devices, such as digital cameras and Personal Digital Assistants.

Keep foreign objects out of the Bridge media slot. Never allow metal objects, such as screws, staples and paper clips, to enter the computer or keyboard. Foreign metal objects can create a short circuit, which can cause computer damage and fire, possibly resulting in serious injury.

- *The slot does not support Magic Gate functions.*
- *Memory Stick Duo/PRO Duo and the Memory Stick adaptor are not compatible with the Bridge media slot. Do not insert Memory Stick Duo/PRO Duo into the slot. Data may be lost or damaged if you use any card other than those supported.*

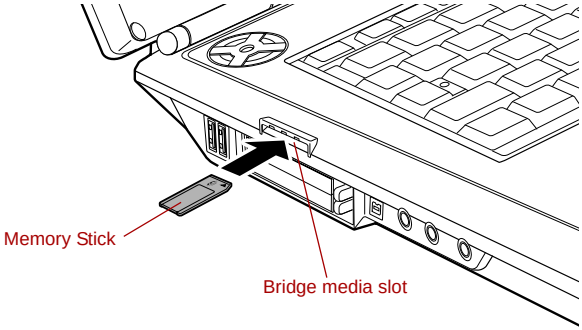
Write protection

Memory Stick can be write protected to safeguard your data. To write-protect a Memory Stick, slide the lock on the back of the Memory Stick to the lock position.

Inserting a Memory Stick

To insert a Memory Stick, follow the steps as detailed below:

1. Insert the Memory Stick into the Bridge media slot on the side of the computer.
2. Press the Memory Stick gently to ensure a firm connection is made.



Inserting a Memory Stick

Removing a Memory Stick

To remove a Memory Stick, follow the steps as detailed below:

1. Open the **Safely Remove Hardware** icon on the Windows Task Bar.
2. Point to **Memory Stick** and click the left Touch Pad control button.
3. Press the Memory Stick to partially extend it out of the computer.
4. Grasp the Memory Stick and remove it.

- *Make sure the* **Media slot** *indicator is out before you remove the Memory Stick or turn off the computer's power. If you remove the Memory Stick or turn off the power while the computer is accessing the Memory Stick you may lose data or damage the card.*
- *Do not remove a Memory Stick while the computer is in Standby or Hibernation Mode. The computer could become unstable or data in the Memory Stick could be lost.*

xD picture card

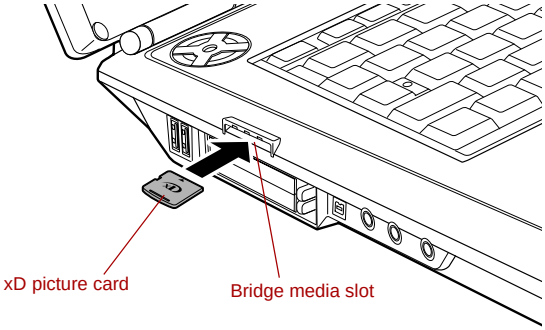
The computer is equipped with a Bridge media slot that can accommodate xD picture card flash memory cards with various memory capacities so that you can easily transfer data from devices, such as digital cameras.

Keep foreign objects out of the Bridge media slot. Never allow metal objects, such as screws, staples and paper clips, to enter the computer or keyboard. Foreign metal objects can create a short circuit, which can cause computer damage and fire, possibly resulting in serious injury.

Inserting an xD picture card

To insert an xD picture card, follow the steps as detailed below:

1. Insert the xD picture card into the Bridge media slot on the side of the computer.
2. Press the xD picture card gently to ensure a firm connection is made.



Inserting an xD picture card

Removing an xD picture card

To remove an xD picture card, follow the steps as detailed below:

1. Open the **Safely Remove Hardware** icon on the Windows Task Bar.
2. Point to **xD picture card** and click the left Touch Pad control button.
3. Press the xD picture card to partially extend it out of the computer.
4. Grasp the xD picture card and remove it.

- *Make sure the* **Media slot** *indicator is out before you remove the xD picture card or turn off the computer's power. If you remove the xD picture card or turn off the power while the computer is accessing the xD picture card you may lose data or damage the card.*
- *Do not remove an xD picture card while the computer is in Standby or Hibernation Mode. The computer could become unstable or data in the xD picture card could be lost.*

Memory card care

- Memory cards have a limited lifespan, so it is important to backup important data.
- Do not twist or bend memory cards.
- Do not expose memory cards to liquids or store in humid areas or lay media close to containers of liquid.
- Do not touch the metal part of a memory card or expose it to liquids or let it get dirty.
- After using memory card, return it to its case.

For more details on using memory cards, see manuals accompanying the cards.

MultiMediaCard

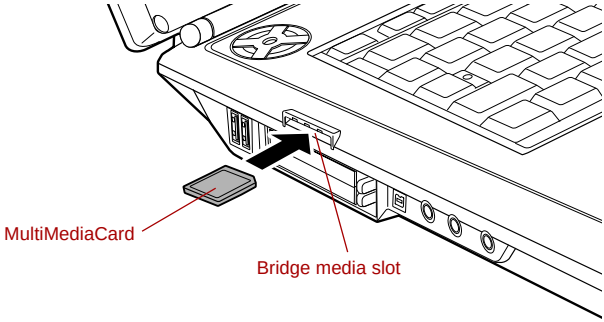
The computer is equipped with a Bridge media slot that can accommodate MultiMediaCard flash memory cards with various memory capacities so that you can easily transfer data from devices, such as digital cameras and Personal Digital Assistants. MultiMediaCards have a high level of security and copy protection features.

Keep foreign objects out of the Bridge media slot. Never allow metal objects, such as screws, staples and paper clips, to enter the computer or keyboard. Foreign metal objects can create a short circuit, which can cause computer damage and fire, possibly resulting in serious injury.

Inserting a MultiMediaCard

To insert a MultiMediaCard, follow the steps as detailed below:

1. Insert the MultiMediaCard into the Bridge media slot on the side of the computer.
2. Press the MultiMediaCard gently to ensure a firm connection is made.



Inserting a MultiMediaCard

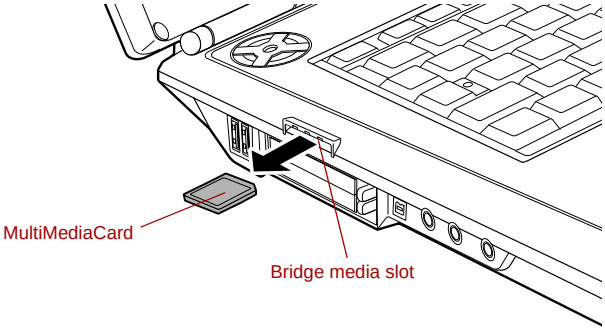
Make sure the MultiMediaCard is oriented properly before you insert it.

Removing a MultiMediaCard

To remove a MultiMediaCard, follow the steps as detailed below:

1. Open the **Safely Remove Hardware** icon on the Windows Task Bar.
2. Point to **MultiMediaCard** and click the left Touch Pad control button.
3. Press the MultiMediaCard to partially extend it out of the computer.

4. Grasp the MultiMediaCard and remove it.



Removing a MultiMediaCard

- *Make sure the* **Media slot** *indicator is out before you remove the MultiMediaCard or turn off the computer's power. If you remove the MultiMediaCard or turn off the power while the computer is accessing the MultiMediaCard you may lose data or damage the card.*
- *Do not remove a MultiMediaCard while the computer is in Standby or Hibernation Mode. The computer could become unstable or data in the MultiMediaCard could be lost.*

MultiMediaCard care

Set the write-protect switch to the lock position, if you do not want to record data.

- Do not write to a MultiMediaCard if the battery power is low. Low power could affect writing accuracy.
- Do not remove a MultiMediaCard while read/write is in progress.
- The MultiMediaCard is designed so that it can be inserted only one way. Do not try to force the card into the slot.
- Do not leave a MultiMediaCard partially inserted in the slot. Press the MultiMediaCard until you hear it click into place.
- Do not twist or bend MultiMediaCards.
- Do not expose MultiMediaCards to liquids or store in humid areas or lay media close to containers of liquid.
- After using a MultiMediaCard, return it to its case.
- Do not touch the metal part or expose it to liquids or let it get dirty.

Memory expansion

You can install additional memory into the computer in order to increase the amount of system memory that is available. This section describes how to install and remove optional memory modules.

- *You should place a mat beneath the computer in order to prevent the computer's lid from becoming scratched or damaged when you are installing/replacing the memory module. In this instance you should avoid mats that are made of materials that hold or generate static electricity.*
- *When installing or removing a memory module, you must ensure that you do not touch any other internal areas of the computer.*
- *The Front-side System Bus Speed (FSB) for this computer is 533MHz. While 667MHz memory modules can be installed, the FSB will depend on the computer.*

- *Use only memory modules approved by TOSHIBA.*
- *Do not try to install or remove a memory module under the following conditions as you can damage the computer and/or the module, and you risk losing data:*
  a. *The computer is turned on.*
  b. *The computer was shut down using either Standby Mode or Hibernation Mode.*
  c. *Wake-up on LAN is enabled.*
  d. *Wake-up on Wireless LAN is enabled.*
- *Be careful not to let screws or other foreign matter fall into the computer. It could cause malfunction or electric shock.*
- *Expansion memory is a precision electronic component that may be fatally damaged by static electricity. Since the human body can carry static electricity, it is important that you discharge yourself before touching or installing any expansion memory modules. To discharge your body's static electricity, simply touch any metal close to you with bare hands.*
- *In order to ensure that the computer power is not turned on while working, set the Wireless communication switch to OFF.*

Point to note about memory module error

If you install a memory module that is not compatible with the computer, a "beep signal" will sound when you turn on the power. If the incompatible module is installed in Slot A, there will be a long beep of one second, followed by one short beep of half a second, while if the incompatible module is in Slot B, there will be a long beep followed by two short beeps.

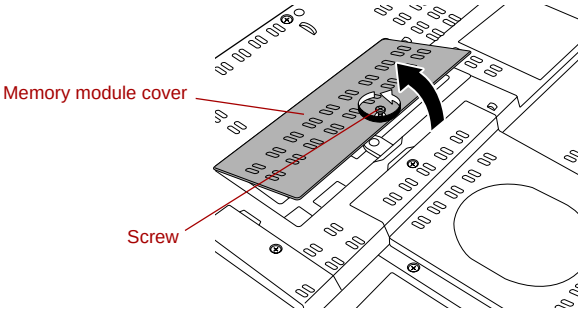
In the event that both modules are incompatible, there will be a long beep followed by one short beep, a pause, and then a long beep followed by two short beeps - in all instances you should shut down the computer and remove the incompatible module(s).

Use a #0 point Phillips screwdriver to remove and fasten the screws - the use of an incorrect screwdriver can damage the screw heads.

Installing a memory module

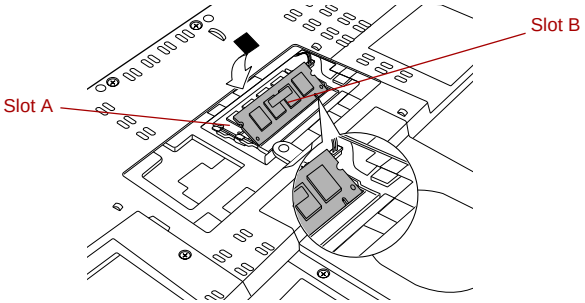
The computer contains slots for two memory modules, one positioned immediately over the other - the procedures are the same for installing either module.

1. Set the computer to Boot Mode and turn its power off - make sure the **Power** indicator is off (refer to the *Turning off the power* section in Chapter 3, *Getting Started*, if required).
2. Remove the AC adaptor and all cables and peripherals connected to the computer.
3. Turn the computer upside down and remove the battery pack (refer to *Replacing the battery pack* section in Chapter 6, *Power*, if required).
4. Loosen the screw securing the memory module cover in place - please note that this screw is attached to the cover in order to prevent it from being lost.
5. Slide your fingernail or a thin object under the cover and lift it off.



Removing the memory module cover

6. Align the notch of the memory module with that of the memory slot and gently insert the module into the slot at about a 45 degree angle before pressing it down until the latches on either side snap into place.



Seating the memory module

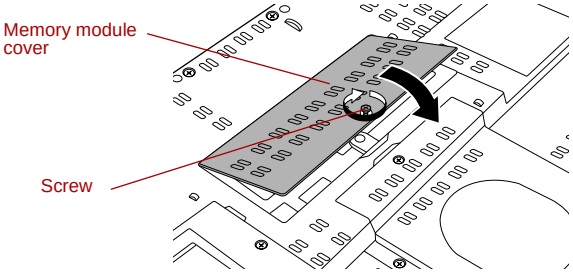
Align the grooves along the edges of the memory module with the locking tabs on the connector and insert the module into the connector firmly - if you find it difficult to install the memory module, gently prise the locking tabs outwards using the tip of your finger.

Please also ensure that you hold the memory module along its left and right hand edges - the edges with the grooves in.

- *Never allow metal objects, such as screws, staples and paper clips, to enter the computer or keyboard. Foreign metal objects can create a short circuit, which can cause computer damage and fire, possibly resulting in serious injury.*
- *Do not touch the connectors on the memory module or on the computer. Debris on the connectors may cause memory access problems.*

7. Seat the memory module cover in place and secure it with one screw.

Take care to ensure that the memory module cover is firmly closed.



Seating the memory module cover

8. Install the battery pack - refer to *Replacing the battery pack* section in Chapter 6, *Power*, if required.
9. Turn your computer over.
10. Switch the computer on and make sure the added memory is recognized - this can be confirmed by clicking **start** followed by **Control Panel** followed by **Performance and Maintenance** and then selecting the **System** icon.
11. Open the **System Properties** window and then click the **General** tab.

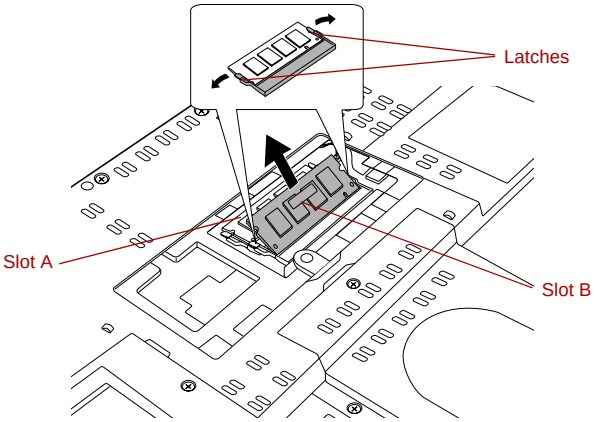
Removing a memory module

To remove the memory module, follow the steps as detailed below:

1. Set the computer to Boot Mode and turn its power off - make sure the **Power** indicator is off (refer to the *Turning off the power* section in Chapter 3, *Getting Started*, if required).
2. Remove the AC adaptor and all cables and peripherals connected to the computer.

3. Turn the computer upside down and remove the battery pack (refer to *Replacing the battery pack* section in Chapter 6, *Power*, if required).
4. Loosen the screw securing the memory module cover in place - please note that this screw is attached to the cover in order to prevent it from being lost.
5. Slide your fingernail or a thin object under the cover and lift it off.
6. Push the latches away from the module in order to release it - a spring will force one end of the module up at an angle.
7. Grasp the module by its edges and remove it from the computer.

- *If you use the computer for a long time, the memory modules and the circuits located close to the memory modules will become hot. In this case, let them cool to room temperature before you replace them.*
- *Do not touch the connectors on the memory module or on the computer. Debris on the connectors may cause memory access problems.*



Removing the memory module

8. Seat the memory module cover in place and secure it with one screw.

Take care to ensure that the memory module cover is firmly closed.

9. Install the battery pack - refer to *Replacing the battery pack* section in Chapter 6, *Power*, if required.
10. Turn your computer over.

Battery Packs

You can increase the portability of the computer with additional battery packs so that, if you're away from an AC power source and your battery runs low, you can replace it with a freshly charged battery. Two types of additional battery pack are available, 4,700mAh and 7,050mAh. Please refer to Chapter 6, *Power* for further information.

Universal AC Adaptor

If you frequently use your computer at more than one site, it may be convenient to purchase an additional AC adaptor to be kept at each site in order to remove the need to always carry the adaptor with you.

Battery Charger

The battery charger provides a convenient way to charge up to two Lithium Ion battery packs without requiring the use of your computer.

Hard disk drive pack

An extra hard disk drive expands the flexibility of your system and allows you to carry your data separately without having to carry the computer.

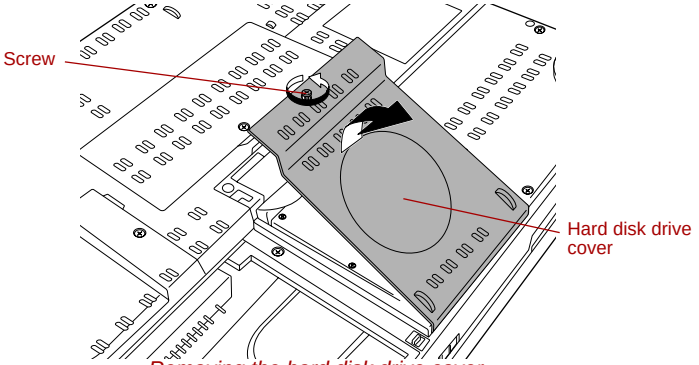
Use a #0 point Phillips screwdriver to remove and fasten the screws - the use of an incorrect screwdriver can damage the screw heads.

Removing the hard disk drive pack

To remove the hard disk drive pack, follow the steps as detailed below:

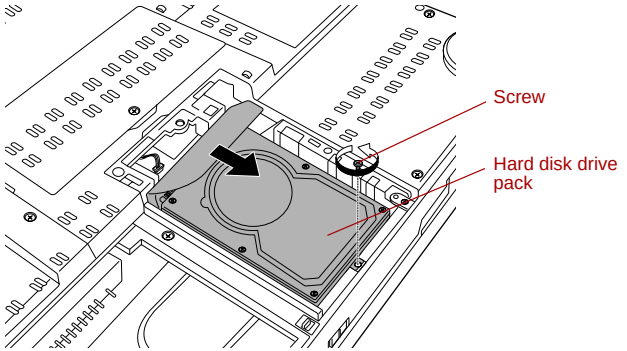
1. Set the computer to Boot Mode and turn its power off - make sure the **Power** indicator is off (refer to the *Turning off the power* section in Chapter 3, *Getting Started*, if required).
2. Remove the AC adaptor and all cables and peripherals connected to the computer.
3. Turn the computer upside down and remove the battery pack (refer to *Replacing the battery pack* section in Chapter 6, *Power*, if required).
4. Loosen the screw securing the hard disk drive cover in place.

5. Lift the cover up and out, and remove it from the computer.



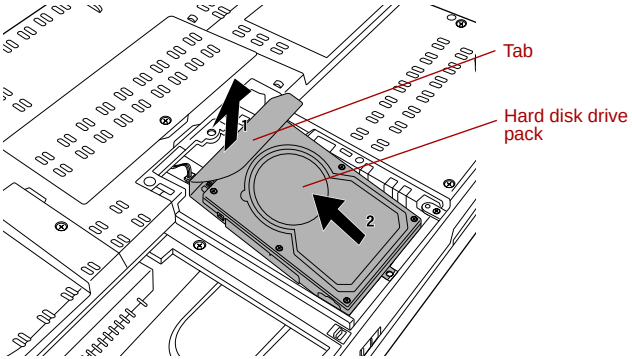
Removing the hard disk drive cover

6. Remove the screw which hold the hard disk drive pack in place.
7. Slide the hard disk drive pack to the left and disconnect it from the computer connector.



Removing the hard disk drive pack (1)

8. Lift up on the tab (1) and remove the hard disk drive pack from the computer while it is tilted up (2).

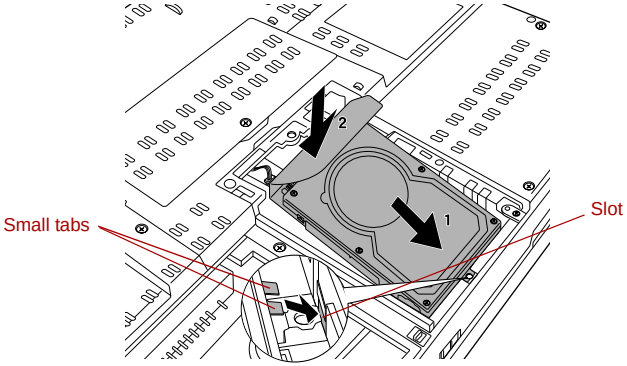


Removing the hard disk drive pack (2)

Installing the hard disk drive pack

To install the hard disk drive pack, follow the steps as detailed below:

1. While holding the hard disk drive pack at an angle, slide the small tabs into the slot on the computer (1).
2. Slowly lower the hard disk drive pack into place (2).



Installing the hard disk drive pack

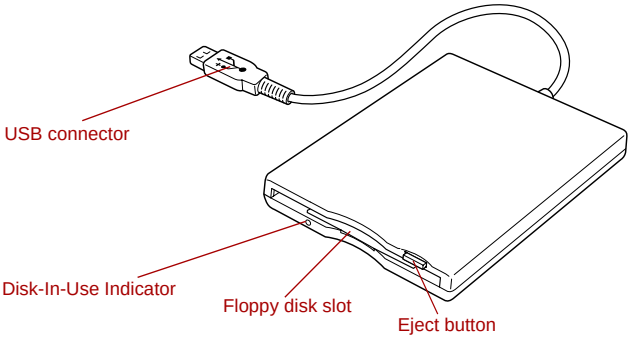
3. Slide the hard disk drive pack into the connector, taking care to ensure a firm connection is made.

You must ensure that the hard disk drive is connected to the connector in a vertical position - if an attempt is made to connect the hard disk drive while it is slanted, you might damage the connector or the drive itself.

4. Seat the hard disk drive cover and press it down until its latches click into place.
5. Secure the cover with one screw.
6. Turn your computer over.

USB floppy disk drive

The USB floppy disk drive accommodates either a 1.44MB or 720KB a 3.5" floppy disk and connects to one of the computer's USB ports. Please be aware that this device is supplied as standard with some models and as an option with others.



USB floppy disk drive

USB connector	Insert this connector into one of the free USB ports of your computer.
Disk-In-Use Indicator	This indicator glows when the floppy disk is being accessed.
Floppy disk slot	Insert a floppy disk into this slot.
Eject button	When a floppy disk is fully seated in the drive, the eject button will pop out. In order to remove the disk, push the eject button in order to cause it to partially pop out of the drive and then remove it.

Check the **Disk-In-Use** *indicator when you use the floppy disk drive. Do not press the eject button or turn off the computer while the light is glowing. Doing so could destroy data and damage the floppy disk or the drive.*

In use, the following should be noted regarding the operation of the USB floppy disk drive:

- *The drive should be placed on a flat, horizontal surface.*
- *Do not set the drive on an incline greater than 20° while it is operating.*
- *Do not place anything on top of the drive.*

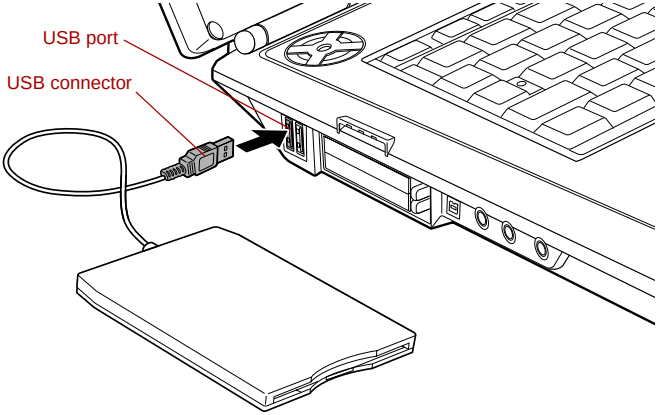
Using the USB floppy disk drive

The USB floppy disk drive accommodates either a 1.44MB or 720KB floppy disk and connects to one of the computer's USB ports. Please be aware that this device is supplied as standard with some models and as an option with others.

Connecting the USB floppy disk drive

To connect the drive, plug the floppy disk drive's USB connector into one of the computer's free USB ports.

Make sure the connector is right side up and properly aligned with the socket. Do not try to force the connection; doing so can damage the connecting pins.



Connecting the USB floppy disk drive

If you connect the USB floppy disk drive after the computer has already been switched on, it will take about ten seconds for it to be recognized by the computer. Do not attempt to disconnect and reconnect the drive before this period has elapsed.

Disconnecting the USB floppy disk drive

When you have finished using the USB floppy disk drive, you can follow the procedures below in order to disconnect it:

1. Wait for the indicator light to go out to make sure all floppy disk activity has stopped.

If you disconnect the floppy disk drive or turn off the power while the computer is accessing the drive you may lose data or damage the floppy disk or the drive.

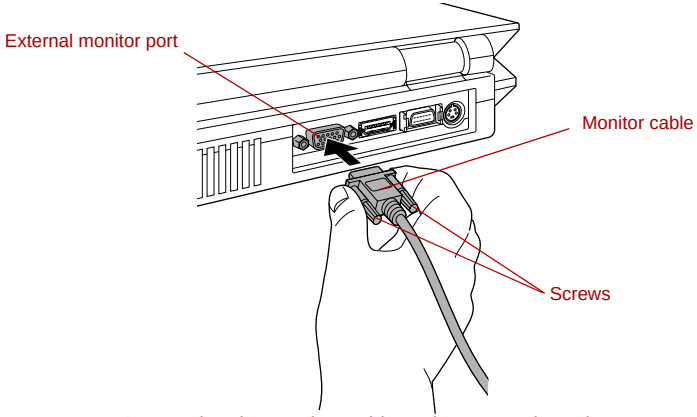
2. Click the **Safely Remove Hardware** icon on the Task Bar.
3. Click the USB floppy disk drive device that you want to remove.

4. Carefully pull the floppy disk drive's USB connector out from within the computer's USB port.

External monitor

An external analog monitor can be connected to the computer's external monitor port, with the computer supporting WXGA+ and WUXGA video modes. In order to connect a monitor, follow the steps as detailed below:

1. Turn the computer's power off.
2. Connect the monitor cable to the external monitor port and tighten the screws on the left and right hand side of the connector as required.



Connecting the monitor cable to the external monitor port

The computer is equipped with either an HDMI or D-Video out port.

3. Turn the external monitor's power on.
4. Turn the computer's power on.

When you turn on the power, the computer will automatically recognize the monitor and determine whether it is a color or monochrome device. In the event that you find that there are issues getting an image displayed on the correct monitor, you should consider using the **Fn** + **F5** hot key to change the display settings (if you then disconnect the external monitor before you turn the computer's power off, be sure to press **Fn** + **F5** hot key again to switch to the internal display).

Please refer to Chapter 5, *The Keyboard*, for further details on using hot keys to change the display setting.

TV

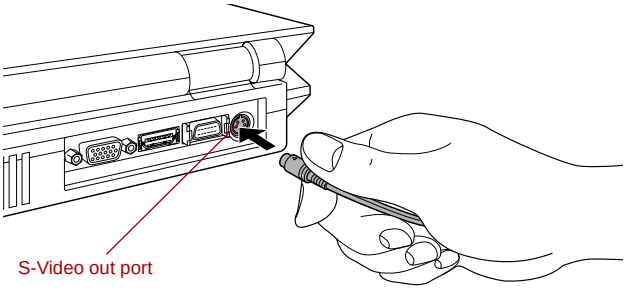
The S-Video data on your computer can be viewed on a TV set. To do so, connect your computer's S-Video out port to the TV using the S-Video out cable.

You can use the hotkeys **Fn** + **F5** to change the display device. Refer to Chapter 5, *The Keyboard*.

Installation

Connection via the S-Video out port

1. Plug one end of the S-Video out cable into the S-Video out port of your computer.



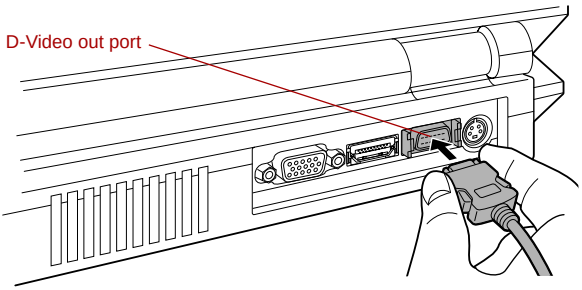
Connecting the S-Video out port

The computer is equipped with either an HDMI or D-Video out port.

2. Insert the other end of the S-Video out cable into the S1-/S2 video input of the TV set. You can then either use the computer's speakers or a set of headphones connected to the headphone jack to get sound.

Connection via the D-Video out port

1. Plug one end of the D-Video out cable into the D-Video out port of your computer.



Connecting the D-Video out port

2. Insert the other end of the D-Video out cable into the video input terminal of the TV set (Use your computer's speakers or a headphone to get sound. Connect the headphone to the computer's headphone jack).

Settings for display video on TV

To view video on the TV set, be sure to configure the following settings otherwise you may find that nothing is displayed.

- *Be sure to use the* **Fn** + **F5** *HotKey to select the display device before starting to play video. Do not change the display device while playing video.*
- *Do not change the display device under the following conditions.*
  - *While data is being read or written*
  - *While communication is being carried out*

Setting for nVIDIA GeForce Go 7600 model

If a television is connected to the computer, you can set the TV type from within the Display Properties by following the steps as detailed below:

1. Click **start** and click **Control Panel**.
2. Click **Appearance and Themes** and click the **Display** to open the **Display Properties** window.
3. Click the **Settings** tab and then click the **Advanced** button.
4. Click the **GeForce Go 7600** tab, click **Current display** and select **TV** (TV may be displayed as "HDTV").
5. Click **Device Settings**.
6. Select the **Select TV format** and select the format that your TV supports.

Changing the resolution

After you connect an NTSC format television, follow the steps detailed below in order to set the display resolution to 640x480 pixels.

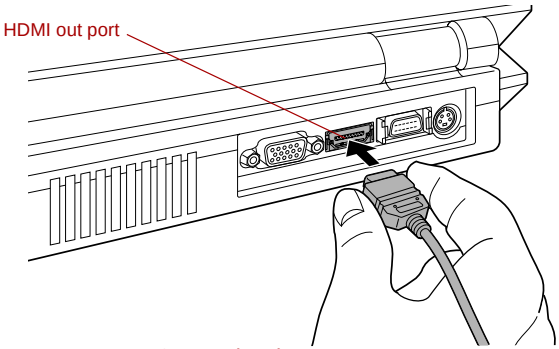
1. Click **start** and click **Control Panel**.
2. Click **Appearance and Themes** and click the **Display** to open the **Display Properties** window.
3. Click the **Settings** tab and then click the **Advanced** button.
4. Select the **Adapter** tab, then select **List All Modes...**.
5. Select **640 by 480, True Color (32 bpp), 60 Hertz**.

HDMI

A HDMI monitor can be connected to the HDMI out port on the computer. To connect monitor, follow the steps as detailed below:

As the port operation of all HDMI (High-Definition Multimedia Interface) monitors has not been confirmed, some HDMI monitors may not function properly.

1. Plug one end of the HDMI out cable into the HDMI out port of the HDMI device.



Connecting the HDMI out port

The computer is equipped with either an HDMI or D-Video out port.

2. Plug the other end of the HDMI out cable into the HDMI out port on your computer.

Settings for display video on HDMI

To view video on the HDMI device, be sure to configure the following settings otherwise you may find that nothing is displayed.

- *Be sure to use the* **Fn** + **F5** *HotKey to select the display device before starting to play video. Do not change the display device while playing video.*
- *Do not change the display device under the following conditions.*
  - *While data is being read or written.*
  - *While communication is being carried out.*

If a HDMI is connected to the computer, set the HDMI out format in Display Properties. Follow the steps as detailed below:

1. Click **start** and click **Control Panel**.
2. Click **Appearance and Themes** and click the **Display** to open the **Display Properties** window.
3. Click the **Settings** tab and then click the **Advanced** button.

4. Click the **GeForce Go 7600** tab and click bitmap of **HDMI device** (it is displayed as “DVI Monitor”).
5. Click **Device Settings**.
6. Confirm that **Tread Digital Display as HDTV** is checked.
7. Select the **Select TV format** and select TV format that your HDMI device supports.
8. Select the appearance of Windows desktop type at **HDTV Overscan Compensation**.

Displaying movies on a External display device

The Displaying movies on a External display device function is only available in nVIDIA models.

This section describes how to set up your system to display movies simultaneously on your computer’s internal LCD and on an external TV or CRT monitor.
Follow the steps as detailed below:

1. Click **start** and click **Control Panel**.
2. Click **Appearance and Themes** and click the **Display** to open the **Display Properties** window.
3. Click the **Settings** tab and then click the **Advanced** button.
4. Select the **GeForce Go 7600** tab.
   a. Click the **GeForce Go 7600** button.
   b. Click **`Full Screen Video`** in the small menu.
   c. From the **`Full screen`** device drop down menu, select **Primary display** or **Secondary display** to enable movie display on an external TV or CRT monitor.
   Primary Device: Movies will be displayed full screen on the computer’s internal LCD and in a window on the TV or CRT monitor.
   Secondary Device: Movies will be displayed full screen on the TV or CRT monitor and in a window on the computer’s internal LCD.
   Disable: Movies will not be displayed on a TV or CRT monitor.

- *Even if the above does not set up, there are some as which the movies is simultaneously displayed depending on the type of the movies.*
- *This settings is not available on the some application like Media Center.*

   d. Click **OK**.
   e. Click **OK** in the **`Display Properties`** screen.

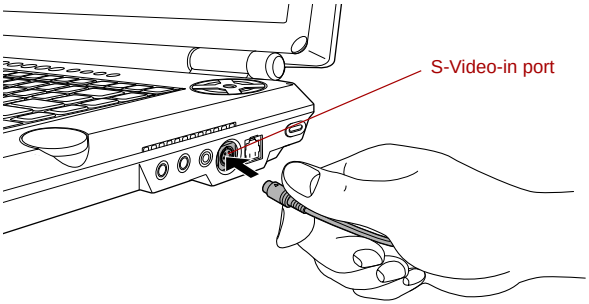
VIDEO-IN

Refer to chapter 8, *Using the Remote Controller, Front operation panel and QosmioPlayer* for details on how to connect and use the computer with the VIDEO-IN cable.

S-Video-in

This port allows you to import video data from analog video cameras or video decks by connecting your computer to this type of device. Imported video can be edited or written to a DVD disk.

1. Insert one end of the S-Video-in cable into the S-Video-in port of your computer.



Connecting the S-Video-in port

2. Insert the other end of the S-Video-in cable into the output port of the analog device you wish to connect. To hear sounds, use a video cable to connect the sound terminals of the audio device and your computer (red: sound, right channel, white: sound, left channel).

After connecting an analog video camera or a video deck to your computer, run WinDVR. WinDVR is started by selecting **start -> All Programs -> InterVideo WinDVR**.

i.LINK (IEEE1394)

i.LINK, also known as IEEE1394, is used for high-speed data transfer between a range of compatible devices such as:

- Digital video cameras
- Hard disk drives
- Magneto Optical drives
- Writable optical disc drives

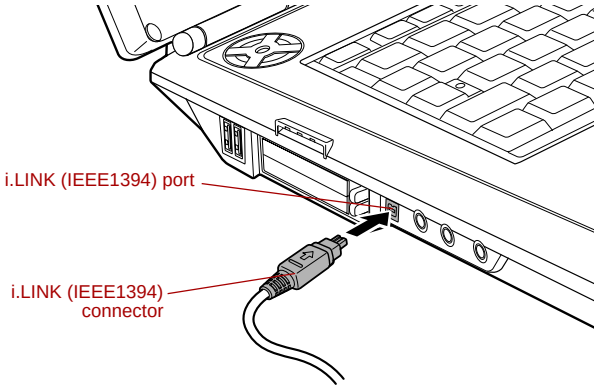
Please note that i.LINK uses a four-pin connector which does not carry any power - therefore, any external device will need its own power supply in order to operate.

Precautions

- Make a back-up of your data before transferring it to the computer in order to avoid the possibility that the original data will be damaged. With regard to this, there is a particular risk that some frames will be deleted in the case of digital video transfer - TOSHIBA assumes no liability for such loss of data.
- Do not transfer data in areas where static electricity is easily generated or in areas subjected to electronic noise - this can result in data being destroyed.
- If you are transferring data through an IEEE1394 hub, do not connect or disconnect other devices from the hub during the transfer operation - there is a likelihood that data will be damaged. In addition, you should connect all required devices to the hub before you turn on the computer's power.
- You may not use any copyrighted video or music data copied from a video camera except for your personal enjoyment.
- If you connect/disconnect an i.LINK device to/from another i.LINK device that is currently exchanging data with the computer, data frames may be dropped.
- Make sure data transfer has ended or turn off the computer, before you:
  - Connect/disconnect an i.LINK device to/from the computer.
  - Connect/disconnect an i.LINK device to/from another i.LINK device that is connected to the computer.

Connecting

1. Make sure the connectors are properly aligned before you plug the i.LINK (IEEE1394) cable into the computer.



Connecting the i.LINK (IEEE1394) port

2. Plug the other end of the cable into the i.LINK device.

Please take note of the following when you use i.LINK devices:

- You may need to install drivers for your i.LINK devices to function.
- Not all i.LINK devices have been tested, therefore compatibility with all i.LINK devices cannot be guaranteed.
- Some devices might not functions such as Standby Mode or automatic power off.
- Do not connect or disconnect an i.LINK device while it is using an application or when the computer is automatically shutting it down to save power - doing so might cause data to be destroyed.

Disconnecting

To remove an i.LINK device, follow the steps as detailed below:

1. Open the **Safely Remove Hardware** icon on the Windows Task Bar.
2. Point to **i.LINK (IEEE1394) device** and click the left Touch Pad control button.
3. Disconnect the cable from the computer and then from the i.LINK device.

Please be aware that you should also refer to the documentation that was supplied with your i.LINK device.

Bluetooth USB Adaptor

A Bluetooth adaptor that has a USB connector. Wireless communications can be carried out with Bluetooth-compatible equipment by connecting to the USB port of the computer.

You can buy the module from TOSHIBA dealer.

Bluetooth Wireless Mouse

The Bluetooth Wireless Mouse is a wireless optical mouse compatible with Bluetooth.

You can buy the Bluetooth Wireless Mouse from TOSHIBA dealer.

Bluetooth Wireless Stereo

The Bluetooth Wireless Stereo is a wireless stereo headphone compatible with Bluetooth.

You can buy the Bluetooth Wireless Stereo from TOSHIBA dealer.

Bluetooth 2.0+EDR Module Kit

The Bluetooth 2.0+EDR Module Kit is an internal computer module which supports both Bluetooth V2.0 and EDR.

You can buy the module from TOSHIBA dealer.

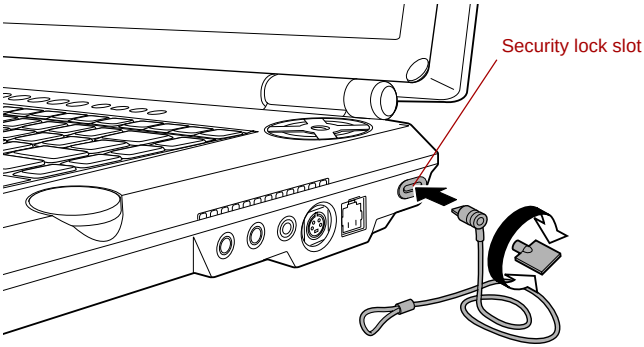
Security lock

A security locks enable you to anchor your computer to a desk or other heavy object in order to help prevent unauthorized removal or theft. The computer has a security lock slot on its right side into which you can attach one end of the security cable, while the other end attaches to a desk or similar object. The methods used for attaching security cables differ from product to product. Please refer to the instructions for the product you are using for more information.

Connecting the security lock

In order to connect a security cable to the computer, follow the steps as detailed below:

1. Turn the computer so its right hand side faces you.
2. Align the security cable with the 'lock hole' and secure it in place.



Security lock

Chapter 10

Troubleshooting

TOSHIBA have designed this computer for durability, however, should problems occur you are able to use the procedures detailed in this chapter to help determine the cause.

All users should become familiar with this chapter as knowing what might go wrong can help prevent problems from occurring in the first place.

Problem solving process

Resolving problems will be much easier if you observe the following guidelines:

- Stop immediately when you recognize a problem exists as taking further action may result in data loss or damage, or you may destroy valuable problem related information that can help solve the problem.
- Observe what is happening - write down what the system is doing and what actions you performed immediately before the problem occurred. If you have a printer attached, print a copy of the screen using the computer's **PrtSc** key.

Please also be aware that the questions and procedures described in this chapter are meant only as a guide, they are not definitive problem solving techniques. In reality many problems can be solved simply, but a few may require help from your reseller, dealer or service provider - if you find you need to consult others, be prepared to describe the problem in as much detail as possible.

Preliminary checklist

You should always consider the simplest solution first - the items detailed in this checklist are easy to fix and yet can cause what appears to be a serious problem:

- Make sure you turn on all peripheral devices before you turn on the computer - this includes your printer and any other external device you are using.
- Before you attach an external device you should first turn the computer off, then when you turn the computer back on again it will recognize the new device.
- Make sure all options are configured properly in the computer's setup program and that all required driver software has been loaded (please refer to the documentation provided with the option for further information on its installation and configuration).
- Check all cables to ensure they are correctly and firmly attached to the computer - loose cables can cause signal errors.
- Inspect all connecting cables for loose wires and all connectors for loose pins.
- Check that your floppy disk, CD or DVD media is correctly loaded and, in the case of a floppy disk, that its write protect tab is correctly set.

Always try to make detailed notes of your observations and keep them in a permanent error log - this will help you to describe your problems to your reseller, dealer or service provider. In addition, if a problem recurs, the log you have made will help to identify the problem faster.

Analyzing the problem

Sometimes the computer will give you clues that can help you identify why it is malfunctioning. In view of this you should keep the following questions in mind:

- Which part of the computer is not operating properly - keyboard, floppy disk drive, hard disk drive, optical disc drive, display, touch pad, touch pad control buttons - as each device will produce different symptoms.
- Check the options within the operating system to ensure that its configuration is set properly.
- What appears on the display? Does it display any messages or random characters? If you have a printer attached, print a copy of the screen using the **PrtSc** key and, if possible, look up the messages in the documentation provided with the computer, software or operating system.
- Check that all connecting cables are correctly and firmly attached as loose cables can cause erroneous or intermittent signals.
- Do any indicators light, if so, which ones, what color are they and do they stay on or blink? Write down what you see.
- Do you hear any beeps, if so how many, are they long or short and are they high pitched or low pitched? In addition, is the computer making any unusual noises? Write down what you hear.

Record your observations so you can describe them in detail to your reseller, dealer or service provider.

Software	The problems may be caused by your software or disk. If you cannot load a software package, the media may be damaged or the program might be corrupted - in these instances try loading another copy of the software if possible. If an error message appears while you are using a software package you should refer to the documentation supplied with it as this will usually include a problem solving section or a summary of error messages. Next, you should check any error messages against the operating system documentation.
Hardware	If you cannot find a software problem, you should then check the setup and configuration of your hardware. First run through the items in the preliminary checklist as described previously then, if you still cannot correct the problem, try to identify the source - the next section provides checklists for individual components and peripherals.

Before using a peripheral device or application software that is not an authorized Toshiba part or product, make sure the device or software can be used with your computer. Use of incompatible devices may cause injury or may damage your computer.

Hardware and system checklist

This section discusses problems caused by your computer's hardware or attached peripherals. Basic problems may occur in the following areas:

- System start-up
- Self test
- Power
- Password
- Keyboard
- Internal LCD display panel
- Hard disk drive
- DVD Super Multi drive
- HD DVD-ROM drive
- USB floppy disk drive
- PC Card
- ExpressCard
- SD Card
- Memory Stick/Memory Stick Pro
- xD picture card
- MultiMediaCard
- Infrared receiver window
- Pointing device
- USB device
- Memory expansion
- Sound system
- External monitor
- Modem
- LAN
- Wireless LAN
- Bluetooth
- TV output function
- i.LINK (IEEE1394) device
- Video Playback

System start-up

When the computer does not start properly, check the following items:

- Self Test
- Power Sources
- Power-on Password

Self test

When the computer starts up, the self test will be run automatically, and the following will be displayed:

This message remains on the screen for a few seconds.

If the self test is successful, the computer tries to load the operating system according to how the **Boot Priority** option is set within the TOSHIBA HW Setup program.

If any of the following conditions are present, the self test has failed:

- The computer stops and does not proceed to display information or messages except for the TOSHIBA or Qosmio logo.
- Random characters appear on the screen and the system does not function normally.
- The screen displays an error message.

In these instances, turn off the computer, check all cable connections and then restart it - if the self test fails again, contact your reseller, dealer or service provider.

Power

When the computer is not plugged into an AC power outlet, the battery pack is the primary power source. However, your computer also has a number of other power resources, including an intelligent power supply and a Real Time Clock (RTC) battery, all of which are interrelated with any one having the ability to produce apparent power problems.

This section provides checklists for AC power and the battery. If you cannot resolve a problem after following them, the cause may lie with another power related resource - in such an instance you should contact your reseller, dealer or service provider.

Overheating power down

In the event that the computer's internal operating temperature becomes too high, the system will automatically enter either Hibernation Mode or Standby Mode and shut itself down.

Problem	Procedure
Computer shuts down and **DC IN** indicator blinks orange	Leave the computer off until the **DC IN** indicator stops blinking.

It is recommended to leave the computer off until the its interior reaches room temperature even though the **DC IN** *indicator stops blinking.*

	If the computer has reached room temperature and it still does not start, or if it starts but shuts down quickly, contact your reseller, dealer or service provider.
Computer shuts down and its **DC IN** indicator is flashing in orange	This indicates a problem with the heat dispersal system - you should contact your reseller, dealer or service provider.

AC power

If you have trouble turning on the computer with the AC adaptor connected you should check the status of the **DC IN** indicator. Please refer to Chapter 6, *Power* for further information.

Problem	Procedure
AC adaptor doesn't power the computer (**DC IN** indicator does not glow blue)	Check the connections to make sure that the power cord/adaptor is firmly connected to the computer and a working power outlet.
	Check the condition of the cord and terminals. If the cord is frayed or damaged it should be replaced, while if the terminals are soiled, they should be cleaned with a clean cotton cloth.
	If the AC adaptor still does not power the computer, you should contact your reseller, dealer or service provider.

Battery

If you suspect a problem with the battery, you should check the status of the **DC IN** indicator as well as the **Battery** indicator. Please refer to Chapter 6, *Power* for more information on these indicators, together with general battery operation.

Problem	Procedure
Battery doesn't power the computer	The battery may be discharged - connect the AC adaptor to recharge the battery.
Battery doesn't charge when the AC adaptor is attached (**Battery** indicator does not glow orange).	If the battery is completely discharged, it will not begin charging immediately, in these instances you should wait a few minutes before trying again. If the battery still does not charge, you should check that the power outlet the AC adaptor is connected to is supplying power - this can be tested by plugging another appliance into it.
	Check whether the battery is hot or cold to the touch - if so, it will not charge properly and should be allowed to reach room temperature before you try again.
	Unplug the AC adaptor and remove the battery to make sure its connecting terminals are clean - if necessary wipe them with a soft dry cloth lightly dipped in alcohol. Connect the AC adaptor and replace the battery, taking care to ensure that it is securely seated in the computer. Check the **Battery** indicator - if it does not glow, allow the computer to charge the battery for at least twenty minutes. If the **Battery** indicator starts to glow after this period, allow the battery to continue to charge for at least another twenty minutes before turning on the computer. However, if the indicator still does not glow, the battery may be at the end of its operating life and should be replaced. However, if you do not believe the battery is at the end of its operating life, you should speak to your reseller, dealer or service provider.

Problem	Procedure
Battery doesn't power the computer as long as expected	If you frequently recharge a partially charged battery, the battery might not charge to its full potential - in these instances you should fully discharge the battery and then attempt to charge it again.
	Check the power consumption settings within the TOSHIBA Power Saver and consider using a power saving mode.

Real Time Clock

Problem	Procedure
The following message is Displayed on the LCD screen: **`RTC battery is low or CMOS checksum is inconsistent. Press [F1] key to set Date/Time.`**	The charge in the Real Time Clock (RTC) battery has run out - you will need to set the date and time in the BIOS setup application by using the following steps: 1. Press the **F1** key - the BIOS setup application will load. 2. Set the date in the **System Date** field. 3. Set the time in the **System Time** field. 4. Press the **End** key - a confirmation message will be displayed. 5. Press the **Y** key - the BIOS setup application will end and the computer will restart.

Password

Problem	Procedure
Cannot enter password	Please refer to the *TOSHIBA Password Utility* section in Chapter 6, *Power* for further information.

Keyboard

Keyboard problems can be caused by the setup and configuration of the computer - please refer to Chapter 5, *The Keyboard* for further information.

Problem	Procedure
Some letter keys produce numbers	Check that the numeric keypad overlay is not activated - press the **Fn** + **F11** hot key and try typing again.
Output to screen is garbled	Please refer to your software's documentation to ensure that its is not remapping the keyboard in any way (remapping involves changing or reassigning the function of each key). If you are still unable to use the keyboard, you should contact your reseller, dealer or service provider.

Internal LCD display panel

Apparent LCD display problems may be related to the computer's setup and configuration - please refer to Chapter 7, *HW Setup* for further information.

Problem	Procedure
No display	Press the **Fn** + **F5** hot keys to adjust the display priority, and to make sure it is not set for output to an external monitor.
Markings appear on the LCD screen.	These marks may have come from contact with the keyboard, Touch Pad while the display has been closed. You should try to remove the marks by gently wiping the LCD display with a clean dry cloth or, if this fails, with a good quality LCD screen cleaner. In this latter instance you should always follow the instructions with the screen cleaner and always ensure you let the LCD screen dry properly before closing it.
Problems above remain unresolved or other problems occur	You should initially refer to the documentation supplied with you software to determine if it is this that is causing the problems. Alternatively you may wish to run the TOSHIBA PC Diagnostic Tool to check the general operation of the computer. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

Hard disk drive

Problem	Procedure
Computer does not boot from hard disk drive	Check to see whether that is a floppy disk in the floppy disk drive or a CD-ROM/DVD-ROM in the optical disc drive - if so remove it and try to start the computer again. If this has no effect, check the **Boot Priority** setting within the TOSHIBA HW Setup utility - please refer to the *Boot Priority* section in Chapter 7, *HW Setup* for further information.
	Please refer to your operating system documentation in order to determine whether there is a problem with any of the operating system files or settings.
Slow performance	The files on the hard disk drive may be fragmented - in this instance you should run the disk Defragmentation utility to check the condition of your files and the hard disk drive. Please refer to the operating system's documentation or online Help File for further information on running and using the Defragmentation utility.
	As a last resort you should reformat the hard disk drive and then reload the operating system and all other files and data. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

DVD Super Multi drive

For further information, please refer to Chapter 4, *Operating Basics*.

Problem	Procedure
You cannot access a CD/DVD in the drive	Make sure the CD/DVD is inserted properly. Hold the CD/DVD by its edges with the label facing up, and slowly insert it straight into the optical disc drive.
	Check whether the CD/DVD is recognized/finished loading. If the Media slot indicator is flashing the CD/DVD is not yet recognized/finished loading. Wait until the Media slot indicator turns off and try to access the CD/DVD again.
	A foreign object in the drive's disc slot could block laser light from reading the CD or DVD - remove any foreign objects or obstructions that may be present.
	Check whether the CD or DVD is dirty - if it is, wipe it with a clean cloth lightly dipped in water or a neutral cleaner. Please refer to the *Media care* section in Chapter 4 for further details on cleaning the media.
Some CD/DVDs run correctly, but others do not	The computer's software or hardware configuration may be causing a problem - ensure that these configurations match the requirements of the CD/DVD media (refer to the CD's or DVD's documentation if available).
	Check the type of CD or DVD media that you are using - the drive supports the following: DVD-ROM: DVD-ROM, DVD-Video CD-ROM: CD-DA, CD-Text, Photo CD™ (single/multi-session), CD-ROM Mode 1, Mode 2, CD-ROM XA Mode 2 (Form1, Form2), Enhanced CD (CD-EXTRA), Addressing Method 2 Recordable DVD: DVD-R/-R DL, DVD+R/+R DL, DVD-RW, DVD+RW, DVD-RAM
	For DVD Videos, you should check the region coding on the DVD to ensure that it matches that on the DVD Super Multi drive. For reference, region codes are listed in the *Optical disc drives* section in Chapter 2, *The Grand Tour*.

HD DVD-ROM drive

For further information, please refer to Chapter 4, *Operating Basics*.

Problem	Procedure
You cannot access a CD/DVD/HD DVD in the drive	Make sure the drive's disc tray is securely closed - press it gently into the computer until it clicks into place.
	Open the drive's disc tray and ensure the CD, DVD, or HD DVD is properly seated - it should lie flat with the label facing upwards.
	A foreign object in the drive's disc slot could block laser light from reading the CD, DVD, or HD DVD - remove any foreign objects or obstructions that may be present.
	Check whether the CD, DVD, or HD DVD is dirty - if it is, wipe it with a clean cloth lightly dipped in water or a neutral cleaner. Please refer to the *Media care* section in Chapter 4 for further details on cleaning the media.
Some CD/DVD/HD DVDs run correctly, but others do not	The computer's software or hardware configuration may be causing a problem - ensure that these configurations match the requirements of the CD/DVD/HD DVD media (refer to the CD's, DVD's, or HD DVD's documentation if available).
	Check the type of CD, DVD, or HD DVD media that you are using - the drive supports the following: HD DVD-ROM: HD DVD-ROM (Single-sided Single-Layer), HD DVD-ROM (Single-sided Dual-Layer), HD DVD-Video, HD DVD (Twin format disc) DVD-ROM: DVD-ROM, DVD-Video CD-ROM: CD-DA, CD-Text, Photo CD™ (single/multi-session), CD-ROM Mode 1, Mode 2, CD-ROM XA Mode 2 (Form1, Form2), Enhanced CD (CD-EXTRA), Addressing Method 2 Recordable DVD: DVD-R/-R (Dual Layer), DVD+R/+R (Double Layer), DVD-RW, DVD+RW, DVD-RAM

	For DVD Videos, you should check the region coding on the DVD to ensure that it matches that on the HD DVD-ROM drive. For reference, region codes are listed in the *Optical disc drives* section in Chapter 2, *The Grand Tour*.

USB floppy disk drive

The USB floppy disk drive is available only as an option.

For further information, please refer to Chapter 4, *Operating Basics*.

Problem	Procedure
Drive does not operate	Check the connection between the computer and the drive to ensure that it is properly attached.
Some programs run correctly but others do not	The computer's software or hardware configuration may be causing a problem - ensure that these configurations match your requirements (refer to any relevant documentation, for example that supplied with any software in use, for further information).
You cannot access the external floppy disk drive	Try another floppy disk in the drive - if you are able to access this disk then it indicates the original disk and not the drive is probably causing the problem. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

PC Card

For further information, please refer to Chapter 9, *Optional Devices*.

Problem	Procedure
PC Card error occurs	Remove the PC Card from the computer and then reinsert it in order to ensure it is firmly connected.
	In the event that the PC Card is attached to an external peripheral device, ensure that this connection is properly made.
	If the problem persists, then you should refer to the documentation supplied with your PC Card for further information. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

ExpressCard

For further information, please refer to Chapter 9, *Optional Devices*.

Problem	Procedure
ExpressCard error occurs	Remove the ExpressCard from the computer and then reinsert it in order to ensure it is firmly connected.
	In the event that the ExpressCard is attached to an external peripheral device, ensure that this connection is properly made.
	If the problem persists, then you should refer to the documentation supplied with your ExpressCard for further information. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

SD Card, SD-IO and Mini-SD with Adapter

For further information, please refer to Chapter 9, *Optional Devices*.

Problem	Procedure
SD Card error occurs	Remove the SD Card from the computer and then reinsert it in order to ensure it is firmly connected. If the problem persists, then you should refer to the documentation supplied with your SD Card for further information.
You cannot write to an SD Card	Remove the SD Card from the computer and check to ensure that it is not write protected.
You cannot read a file	Check to ensure the required file is actually on the SD Card that is inserted into the computer. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

Memory Stick/Memory Stick Pro

For further information, please refer to Chapter 9, *Optional Devices*.

Problem	Procedure
Memory Stick/Memory Stick Pro error occurs	Remove the Memory Stick/Memory Stick Pro from the computer and then reinsert it in order to ensure it is firmly connected. If the problem persists, then you should refer to the documentation supplied with your Memory Stick/Memory Stick Pro for further information.
You cannot write to an Memory Stick/Memory Stick Pro	Remove the Memory Stick/Memory Stick Pro from the computer and check to ensure that it is not write protected.
You cannot read a file	Check to ensure the required file is actually on the Memory Stick/Memory Stick Pro that is inserted into the computer. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

xD picture card

For further information, please refer to Chapter 9, *Optional Devices*.

Problem	Procedure
xD picture card error occurs	Remove the xD picture card from the computer and then reinsert it in order to ensure it is firmly connected. If the problem persists, then you should refer to the documentation supplied with your xD picture card for further information.
You cannot write to an xD picture card	Remove the xD picture card from the computer and check to ensure that it is not write protected.
You cannot read a file	Check to ensure the required file is actually on the xD picture card that is inserted into the computer. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

MultiMediaCard

For further information, please refer to Chapter 9, *Optional Devices*.

Problem	Procedure
MultiMediaCard error occurs	Remove the MultiMediaCard from the computer and then reinsert it in order to ensure it is firmly connected. If the problem persists, then you should refer to the documentation supplied with your MultiMediaCard for further information.
You cannot write to a MultiMediaCard	Remove the MultiMediaCard from the computer and check to ensure that it is not write protected.
You cannot read a file	Check to ensure the required file is actually on the MultiMediaCard that is inserted into the computer. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

Infrared receiver window

If you are using a USB mouse, you should also refer to both the USB device section in this chapter, and the documentation supplied with your mouse.

Problem	Procedure
Infrared devices do not work as expected	Make sure there is no obstruction blocking communication between the computer and the target device. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

Pointing device

If you are using a USB mouse, you should also refer to both the *USB device* section in this chapter, and the documentation supplied with your mouse.

Touch Pad

Problem	Procedure
On-screen pointer does not respond to pointing device operation	In this instance the system might be busy - if the pointer is shaped as an hourglass, wait for it to return to its normal shape and then try again to move it.
Double-tapping does not work	In this instance, you should initially try changing the double-click speed setting within the Mouse Control utility. 1. Click **start** followed by **Control Panel** followed by **Printers and Other Hardware** and then click the **Mouse** icon. 2. Within the Mouse Properties window, click the **Buttons** tab. 3. Set the double-click speed as required and click **OK**.
The mouse pointer moves too fast or too slow	In this instance, you should initially try changing the speed setting within the Mouse Control utility. 1. Click **start** followed by **Control Panel** followed by **Printers and Other Hardware** and then click the **Mouse** icon. 2. Within the Mouse Properties window, click the **Pointer Options** tab. 3. Set the pointer speed as required and click **OK**. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

Problem	Procedure
The reaction of Touch pad is either too sensitive or not sensitive enough.	Adjust the touch Sensitivity. 1. Click **start** and open the **Control Panel**. 2. Click the **Printers and Other Hardware** icon. 3. Click the **Mouse** icon. 4. Click the **Device Setting** tab. 5. Click the **Setting** button. 6. The Properties for Synaptics Touch pad on PS/2 port screen appears. Double-click Sensitivity in the Select an item section on the left side of the screen. 7. PalmCheck and Touch Sensitivity are displayed. Click Touch **Sensitivity**. 8. Move the slide bar for Touch Sensitivity to make an adjustment. Click the **OK** button. 9. Click the **OK** button on the Device Setting tab.

USB mouse

Problem	Procedure
On-screen pointer does not respond to mouse operation	In this instance the system might be busy - if the pointer is shaped as an hourglass, wait for it to return to its normal shape and then try again to move it.
	Remove the mouse from the computer and then reconnect it to a free USB port it in order to ensure it is firmly attached.
Double-clicking does not work	In this instance, you should initially try changing the double-click speed setting within the Mouse Control utility. 1. Click **start** followed by **Control Panel** followed by **Printers and Other Hardware** and then click the **Mouse** icon. 2. Within the Mouse Properties window, click the **Buttons** tab. 3. Set the double-click speed as required and click **OK**.

Problem	Procedure
The mouse pointer moves too fast or too slow	In this instance, you should initially try changing the speed setting within the Mouse Control utility. 1. Click **start** followed by **Control Panel** followed by **Printers and Other Hardware** and then click the **Mouse** icon. 2. Within the Mouse Properties window, click the **Pointer Options** tab. 3. Set the pointer speed as required and click **OK**.
The mouse pointer moves erratically	The elements of the mouse responsible for detecting movement might be dirty - please refer to the documentation supplied with the mouse for instructions on how to clean it. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

USB device

In addition to the information in this section, please also refer to the documentation supplied with your USB device.

Problem	Procedure
USB device does not work	Remove the USB device from the computer and then reconnect it to a free port it in order to ensure it is firmly attached.
	Ensure that any required USB device drivers are properly installed - to achieve this you should refer to both the device documentation and the operating system documentation.
	If you are using an operating system that does not support USB, you are still able to use a USB mouse and/or USB keyboard by setting the **USB KB/Mouse Emulation** option within the TOSHIBA HW Setup utility to **Enabled**. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

Memory expansion

Please also refer to Chapter 9, *Optional Devices* for further information on installing and removing memory modules.

Problem	Procedure
Beep sounds. (Two beeps, a dash and a dot, for a defective memory module in slot A. Three beeps, a dash and two dots for slot B. When both beeps sound, both memories in slot A and B are defective.)	In the event of “beep” sounds being heard when the computer is switched on you should initially ensure that the installed memory module(s) are compatible with the computer. If you determine that an incompatible module has been installed, you should follow the steps as detailed below: 1. Turn off the computer. 2. Disconnect the AC adaptor and all peripheral devices. 3. Remove the battery pack. 4. Remove the incompatible memory module. 5. Install the battery and/or connect the AC adaptor. 6. Switch on the computer. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

Sound system

In addition to the information in this section, please also refer to the documentation supplied with your audio device.

Problem	Procedure
No sound is heard	Adjust the volume control dial.
	Check the software volume settings.
	Please check to see if Mute is switched to Off.
	Check to make sure the headphone connection is secure.
	Check within the Windows Device Manager application to ensure the sound function is enabled. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

External monitor

Please also refer to Chapter 9, *Optional Devices*, and to the documentation supplied with your monitor for further information.

Problem	Procedure
Monitor does not turn on	After confirming that the monitor's power switch is on, you should check the connections to make sure that the power cord/adaptor is firmly connected to the monitor and to a working power outlet.
No display	Try adjusting the contrast and brightness controls on the external monitor.
	Press the **Fn** + **F5** hot key in order to change the display priority and ensure that it is not set for the internal LCD display only.
Display error occurs	Check that the cable connecting the external monitor to the computer is firmly attached. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

Modem

Problem	Procedure
Communication software can't initialize modem	Make sure the computer's internal modem settings are correct - please refer to the Phone and Modem Options link within the Windows Control Panel.
You can hear a dial tone but can't make a call	If the call is going through a Private Branch Exchange (PBX), take care to ensure that the communication application's tone dial detection feature is disabled. You are also able to use the ATX command.
You place a call, but a connection can't be made	Make sure that the settings are correct within your communication application.
After making a call you can't hear a ring	Ensure that the communication application's tone or pule dialling selection feature is set correctly. You are also able to use the ATD command.
Communication is cut off unexpectedly	The computer will automatically cut off communication when connection with the carrier is not successful for a set time interval - try lengthening this time interval within your communication application.

Problem	Procedure
A **CONNECT** display is quickly replaced by **NO CARRIER**	Ensure that the communication application's error control feature is set correctly. You are also able to use the AT\N command.
Character display becomes garbled during a communication	When transmitting data you should ensure that the parity bit and stop bit settings correspond with those of the remote computer - you should check the flow control and communication protocol settings within your communication application.
You cannot receive an incoming call	Ensure that the communication application's rings before auto answer feature is set correctly. You are also able to use the ATS0 command. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

LAN

Problem	Procedure
Cannot access LAN	Check for a firm cable connection between the LAN jack and the LAN HUB.
Wake-up on LAN does not work	Make sure the AC adaptor is connected. The Wake-up on LAN function consumes power even when the system is off. If problems persist, consult your LAN administrator.

Wireless LAN

If the following procedures do not restore LAN access, consult your LAN administrator. For more information on wireless communication, refer to Chapter 4, *Operating Basics*.

Problem	Procedure
Cannot access Wireless LAN	Make sure the computer's wireless communication switch is set to on. If problems persist, contact your LAN administrator.

Bluetooth

For further information on Bluetooth wireless communication, please refer to Chapter 4, *Operating Basics*.

Problem	Procedure
Cannot access Bluetooth device	Check to ensure the computer's Wireless Communication Switch is set to on.
	Check to ensure the Bluetooth Manager application is running on the computer and that power to the external Bluetooth device is switched on.
	Check to ensure that no optional Bluetooth PC Card or Bluetooth SD Cards are installed in the computer - the built-in Bluetooth hardware cannot operate simultaneously with another Bluetooth controller. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

TV output function

Problem	Procedure
Display on TV is poor	Check to ensure the television type is set correctly your region - NTSC should be used for the United States and Japan, while PAL should be used for Europe.
No display	Try adjusting the contrast and brightness controls on the television.
	Press the **Fn** + **F5** hot key in order to change the display priority and ensure that it is not set for the internal LCD display only. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

If you turn the computer off into Standby Mode while the display is on TV, the computer will select either the internal LCD or an external computer CRT as the display device the next time is switched on.

i.LINK (IEEE1394) device

Problem	Procedure
i.LINK device does not function	Check that the cable connecting the external device to the computer is firmly attached.
	Check to ensure that power is being supplied to the device and that the device is switched on.
	Reinstall the drivers required for the device - this can be achieved by clicking **start** followed by **Control Panel** followed by **Printers and Other Hardware** and then clicking the **Add Hardware** icon at the left-hand side of the screen and following the on-screen instructions.
	Restart the computer and the Windows operating system to re-initialize the device. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

Video Playback

Problem	Procedure
DVD does not play smoothly when using the Windows Media Center Edition of the DVD playing software	Try setting the configuration in the BIOS setup. However, note that when the BIOS setup configuration is modified, the power saving function of PCI Express becomes disabled. Refer to Chapter 7, *HW Setup* for more information. Set the PCI Express Link ASPM in the BIOS setup using the following steps: 1. Press the **F1** key. The BIOS setup screen will appear. 2. Set the PCI Express Link ASPM to **Disabled** in BATTERY. 3. Press the **End** key. A confirmation message will appear. 4. Press the **Y** key. The BIOS setup will terminate and the computer will reboot. If you are still unable to resolve the problem, contact your reseller, dealer or service provider.

Disposing of computer and computer batteries

- Discard this computer in accordance with applicable laws and regulations. For further information, contact your local government.
- This computer contains rechargeable batteries. After repeated use, the batteries will finally lose their ability to hold a charge and you will need to replace them. Under certain applicable laws and regulation, it may be illegal to dispose of old batteries by placing them in the trash.
- Please be kind to our shared environment. Check with your local government authority for details regarding where to recycle old batteries or how to dispose of them properly. This product contains mercury. Disposal of this material may be regulated due to environmental considerations. For disposal, reuse or recycling information, please contact your local government.
- If your hard disk drive or other storage media contains sensitive data, you should be aware that standard deletion procedures do not remove data from the media. These standard deletion procedures include:
  - Selecting Delete for a target file
  - Putting files in the Recycle Bin and emptying the Recycle Bin
  - Reformatting the media
  - Reinstalling an operating system from the recovery CD-ROM

  The procedures above delete only the initial part of the data used for file management. This makes the file invisible to the operating system, but the data can still be read by specialized utilities. If you dispose of the computer, please delete all the data on its hard disk drive. Doing so prevents unauthorized use of such data. To ensure your data is not used for unauthorized purposes, you can:
  - Physically destroy the hard disk drive
  - Use a proven specialized utility to overwrite all data
  - Take the hard disk drive to a professional deletion service

  All data deletion costs will be borne by you.

TOSHIBA support

If you require any additional help using your computer or if you are having problems operating the computer, you may need to contact TOSHIBA for additional technical assistance.

Before you call

Some problems you experience may be related to software or the operating system so it is important that you investigate other sources of assistance first. Before contacting TOSHIBA, try the following:

- Review troubleshooting sections in the documentation supplied with your software and/or peripheral devices.
- If a problem occurs when you are running software applications, consult the software documentation for troubleshooting suggestions and consider calling the software company's technical support department for assistance.
- Consult the reseller or dealer from where you purchased your computer and/or software - they are your best resource for current information and support.

Where to write

If you are still unable to solve the problem and suspect that it is hardware related, write to TOSHIBA at the location listed in the accompanying warranty booklet or visit www.toshiba-europe.com on the Internet.

Chapter 11

Legal Footnotes

This chapter states the Legal Footnotes information applicable to TOSHIBA computers. In the text in this manual, *XX is used to show which Legal Footnotes description is related to TOSHIBA computers.

Description(s) related to this computer are marked with a blue *XX in this manual. Clicking on *XX will display the related description.

CPU*1

Central Processing Unit (“CPU”) Performance Legal Footnotes.

CPU performance in your computer product may vary from specifications under the following conditions:

- use of certain external peripheral products
- use of battery power instead of AC power
- use of certain multimedia, computer generated graphics or video applications
- use of standard telephone lines or low speed network connections
- use of complex modeling software, such as high end computer aided design applications
- use of several applications or functionalities simultaneously
- use of computer in areas with low air pressure (high altitude > 1,000 meters or > 3,280 feet above sea level)
- use of computer at temperatures outside the range of 5°C to 30°C (41°F to 86°F) or >25°C (77°F) at high altitude (all temperature references are approximate and may vary depending on the specific computer model - please refer to your computer documentation or visit the Toshiba website at www.pcsupport.toshiba.com for details).

CPU performance may also vary from specifications due to design configuration.

Under some conditions, your computer product may automatically shut-down. This is a normal protective feature designed to reduce the risk of lost data or damage to the product when used outside recommended conditions. To avoid risk of lost data, always make back-up copies of data by periodically storing it on an external storage medium. For optimum performance, use your computer product only under recommended conditions. Read additional restrictions in your product documentation. Contact Toshiba technical service and support, refer to *TOSHIBA support* section in Chapter 10 Troubleshooting for more information.

Memory (Main System)*2

Part of the main system memory may be used by the graphics system for graphics performance and therefore reduce the amount of main system memory available for other computing activities. The amount of main system memory allocated to support graphics may vary depending on the graphics system, applications utilized, system memory size and other factors. For computer's configured with 4 GB of system memory, the full system memory space for computing activities will be considerably less and will vary by model and system configuration.

Battery Life*3

Battery life may vary considerably depending on product model, configuration, applications, power management settings and features utilized, as well as the natural performance variations produced by the design of individual components. Published battery life numbers are achieved on select models and configurations tested by Toshiba at the time of publication. Recharge time varies depending on usage. Battery may not charge while computer is consuming full power.

After going through many charge and discharge cycles, the battery will lose its ability to perform at maximum capacity and will need to be replaced. This is a normal phenomenon for all batteries. To purchase a new battery pack, see the accessories information that is shipped with your computer.

Hard Disk Drive (HDD) Capacity*4

1 Gigabyte (GB) means 10^9 = 1,000,000,000 bytes using powers of 10. The computer operating system, however, reports storage capacity using powers of 2 for the definition of 1 GB = 2^{30} = 1,073,741,824 bytes, and therefore shows less storage capacity. Available storage capacity will also be less if the product includes one or more pre-installed operating systems, such as Microsoft Windows and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

General HD DVD technology and playback*5

Because HD DVD is a new format that makes use of new technologies, certain disc, digital connection and other compatibility and/or performance issues are possible. Advanced interactive and navigation features of the HD DVD Video format including, but not limited to, Picture in Picture (PIP) and network download features are not supported by this product. See Toshiba HD DVD model “Detailed Specs” at www.computers.toshiba.com for important information on HD DVD playback capabilities. HD DVD Application Logo (HD DVD-ROM) represents the optical drive’s conformity with the DVD Forum’s verification criteria for HD DVD physical format, and does not represent compliance with the HD DVD Video specification defined by the DVD Forum.

Advanced Access Content System (AACS) keys are integrated into your PC for copy protection purposes. Occasional renewal of the AACS key is required, and easily done by connecting to the Internet.

For more information on AACS, visit www.aacsla.com/home.

Depending on HD DVD content, you may experience “frame dropping” or lower performance.

HD DVD viewing on external display requires an HDCP capable HDMI™ or DVI input.

External power required for viewing of HD DVD content.

Since CPU power is dedicated to support HD DVD playback function, you must close all other applications before launching HD DVD playback.

QosmioPlayer does not support HD DVD playback function.

QosmioEngine is not operative during playback of HD DVD.

Dolby Digital audio enhancements are available in the Microsoft Windows operating system only.

Audio content with a high sampling (>48 kHz) rate will be down sampled when using Dolby Virtualizer with the internal speakers or the analog audio output or digital audio output (HDMI and S/PDIF).

LCD*6

Over a period of time, and depending on the usage of the computer, the brightness of the LCD screen will deteriorate. This is an intrinsic characteristic of LCD technology.

Maximum brightness is only available when operating in AC power mode. The screen will dim when the computer is operated on battery power and you may not be able to increase the brightness of the screen.

Graphics Processor Unit (“GPU”)*7

Graphics processor unit (“GPU”) performance may vary depending on product model, design configuration, applications, power management settings and features utilized. GPU performance is only optimized when operating in AC power mode and may decrease considerably when operating in battery power mode.

Wireless LAN*8

The transmission speed over the wireless LAN and the distance over which wireless LAN can reach may vary depending on surrounding electromagnetic environment, obstacles, access point design and configuration, and client design and software/hardware configurations.

[54Mbps is the theoretical maximum speed under the IEEE802.11 (a/b/g) standard.] The actual transmission speed will be lower than the theoretical maximum speed.

Non-applicable Icons*9

Certain computer chassis are designed to accommodate all possible configurations for an entire product series. Therefore, please be aware that your selected model may not have all the features and specifications corresponding to all of the icons or switches shown on the computer chassis.

Copy Protection*10

Applicable copy protection standards included in certain media may prevent or limit recording or viewing of the media.

TV Tuner*11

TV Tuner will function only in the country where the computer was purchased.

Images*12

All images are simulated for purposes of illustration.

Qosmio™ Player*13

The Qosmio™ Player is not a Windows based application. Battery life will be less than when using similar applications in the Windows Operating System.

LCD Brightness and Eye Stain*14

Your LCD display has a brightness approaching that of a TV device. We recommend that you adjust the brightness of your LCD to a comfortable level to prevent possible strain on your eyes.

Safety Use for TV Tuner*15

If you have to operate your computer during a thunderstorm and are connecting the TV tuner to an outside antenna, you should operate your computer using AC power mode. The AC adapter offers some protection against (but does not entirely prevent) possible electric shock caused by lightning. For complete protection, do not operate your computer during a thunderstorm.

Appendix A

Specifications

This appendix summarizes the computer's technical specifications.

Physical Dimensions

Weight (maximum)	4.8 kilograms, configured with: 17" WUXGA, 2GB x 2, 200GB HDD x 2, HD DVD-ROM drive, modem, LAN (1G bps), Wireless LAN, Bluetooth, TV tuner. Weight will vary with other configurations. Above weights are measured at specific criteria. They are not guaranteed as the maximum weight of the actual product.
Size	406 (w) x 285 (d) x 45.5/53.5 (h) millimeters (not including parts that extend beyond the main body)

Environmental Requirements

Conditions	**Ambient temperature**	**Relative humidity**
Operating	5°C (41°F) to 35°C (95°F)	20% to 80%
Non-operating	-20°C (-4°F) to 65°C (149°F)	10% to 90%
Thermal Gradient (operating)	15°C per hour maximum	
Thermal Gradient (non-operating)	20°C per hour maximum	
Wet-bulb temperature	26°C maximum	
Conditions	**Altitude (from sea level)**	
Operating	-60 to 3,000 meters	
Non-operating	-60 to 10,000 meters maximum	

Power Requirements

AC adaptor	100-240 volts AC 50 or 60 hertz (cycles per second)
Computer	15 VDC 8.0 amperes

Built-in Modem

Network control unit (NCU)		
Type of NCU	AA	
Type of line	Telephone line (analog only)	
Type of dialing	Pulse Tone	
Control command	AT commands EIA-578 commands	
Monitor function	Computer's speaker	
Communication specifications		
Communication system	Data: Fax:	Full duplex Half duplex
Communication protocol	Data ITU-T-Rec (Former CCITT) Bell Fax ITU-T-Rec (Former CCITT)	 V.21/V.22/V.22bis/V.32/V.32 bis/V.34/V.90 103/212A V.17/V.29/V.27ter/V.21 ch2
Communication speed	Data transmission and reception 300/1200/2400/4800/7200/9600/12000/14400/16800/19200/21600/24000/26400/28800/31200/33600 bps Data reception only with V.90 28000/29333/30666/32000/33333/34666/36000/37333/38666/40000/41333/42666/44000/45333/46666/48000/49333/50666/52000/53333/54666/56000 bps Fax 2400/4800/7200/9600/12000/14400 bps	

Transmitting level	-10 dBm
Receiving level	-10 to -40 dBm
Input/output impedance	600 ohms ±30%
Error correcting	MNP class 4 and ITU-T V.42
Data compression	MNP class 5 and ITU-T V.42bis
Power supply	+3.3V (supplied by computer)

Appendix B

Display Controller and Video modes

Display controller

The display controller interprets software commands into hardware commands that turn particular parts on the screen on or off.

As indicated below, there are two types of LCD Internal Panels. Various video modes can be displayed on each LCD Internal panel. Refer to the table on the next page which describes in detail supported video modes.

- 17" WXGA+, 1440 horizontal x 900 vertical pixels
- 17" WUXGA, 1920 horizontal x 1200 vertical pixels

Due to the LCD display's increased resolution, lines may appear broken in when displaying images in full-screen text mode.

A high-resolution external monitor connected to the computer can display up to 2048 horizontal and 1536 vertical pixels at up to 16-million colors.

The display controller also controls the video mode and uses industry standard rules to govern the screen resolution and the maximum number of colors that can be displayed at any one time. Therefore, software written for a given video mode will run on any computer that supports that mode.

Software written for a given video mode will run on any computer that supports the mode.

The computer's display controller supports all VGA and SVGA modes, the most widely used industry standards.

Video modes

The computer supports video modes defined in the tables below. If your application offers a selection of mode numbers that do not match the numbers on the table, select a mode based on mode type, resolution, character matrix, number of colors and refresh rates. Also, if your software supports both graphics and text modes, the screen display may appear to operate faster using a text mode.

Table 1 Video modes (VGA)

Video mode	Type	Resolution	Character matrix (pels)	Colors	Scanning frequency Vertical (Hz)
0, 1	VGA Text	40 x 25 Characters	8 x 8	16 of 256K	70
2, 3	VGA Text	80 x 25 Characters	8 x 8	16 of 256K	70
0*, 1*	VGA Text	40 x 25 Characters	8 x 14	16 of 256K	70
2*, 3*	VGA Text	80 x 25 Characters	8 x 14	16 of 256K	70
0+, 1+	VGA Text	40 x 25 Characters	9 x 16	16 of 256K	70
2+, 3+	VGA Text	80 x 25 Characters	9 x 16	16 of 256K	70
4, 5	VGA Grph	320 x 200 Pels	8 x 8	4 of 256K	70
6	VGA Grph	640 x 200 Pels	8 x 8	2 of 256K	70
7	VGA Text	80 x 25 Characters	9 x 14	Mono	70
7+	VGA Text	80 x 25 Characters	9 x 16	Mono	70

Table 1 Video modes (VGA) continued

Video mode	Type	Resolution	Character matrix (pels)	Colors	Scanning frequency Vertical (Hz)
D	VGA Grph	320 x 200 Pels	8 x 8	16 of 256K	70
E	VGA Grph	640 x 200 Pels	8 x 8	16 of 256K	70
F	VGA Grph	640 x 350 Pels	8 x 14	Mono	70
10	VGA Grph	640 x 350 Pels	8 x 14	16 of 256K	70
11	VGA Grph	640 x 480 Pels	8 x 16	2 of 256K	60
12	VGA Grph	640 x 480 Pels	8 x 16	16 of 256K	60
13	VGA Grph	320 x 200 Pels	8 x 8	256 of 256K	70

Table 2 Video modes (WXGA)

- *Vertical Frequency can be set up when outputting to External Monitor.*
- *The screen may not be displayed properly in high resolution mode while running 3D applications, during DVD playback, etc. Reduce the resolution until the screen is displayed properly in such cases.*

Resolution	LCD colors	CRT colors	Vertical frequency (Hz)
640 x 480	256/256K	256/256K	60 75 85 100
800 x 600	256/256K	256/256K	60 75 85 100
1024 x 768	256/256K	256/256K	60 75 85 100
1280 x 1024 (Virtual)*2	256/256K	256/256K	60 75 85 100
1400 x 900*1	256/256K	256/256K	65 75 85 100
1600 x 1200 (Virtual)*2	256/256K	256/256K	60 75 85 100
1920 x 1440 (Virtual)*2	256/256K	256/256K	60 75 85
2048 x 1536 (Virtual)*2	256/256K	256/256K	60 75

*1 The 1440 x 900 resolution is only available in LCD, LCD/CRT and LCD/TV display devices.
*2 Only when displaying on LCD.
*3 The Vertical Frequency can change at CRT.

- *Some video modes do not support multimonitor display.*
- *The above table shows typical display modes.*

Table 2 Video modes (WXGA) continued

- *Vertical Frequency can be set up when outputting to External Monitor.*
- *The screen may not be displayed properly in high resolution mode while running 3D applications, during DVD playback, etc. Reduce the resolution until the screen is displayed properly in such cases.*

Resolution	LCD colors	CRT colors	Vertical frequency (Hz)
640 x 480	64K/64K	64K/64K	60 75 85 100
800 x 600	64K/64K	64K/64K	60 75 85 100
1024 x 768	64K/64K	64K/64K	60 75 85 100
1280 x 1024 (Virtual)*2	64K/64K	64K/64K	60 75 85 100
1400 x 900*1	64K/64K	64K/64K	65 75 85 100
1600 x 1200 (Virtual)*2	64K/64K	64K/64K	60 75 85 100
1920 x 1440 (Virtual)*2	64K/64K	64K/64K	60 75 85
2048 x 1536 (Virtual)*2	64K/64K	64K/64K	60 75

*1 The 1440 x 900 resolution is only available in LCD, LCD/CRT and LCD/TV display devices.

*2 Only when displaying on LCD.

*3 The Vertical Frequency can change at CRT.

- *Some video modes do not support multimonitor display.*
- *The above table shows typical display modes.*

Table 2 Video modes (WXGA) continued

- *Vertical Frequency can be set up when outputting to External Monitor.*
- *The screen may not be displayed properly in high resolution mode while running 3D applications, during DVD playback, etc. Reduce the resolution until the screen is displayed properly in such cases.*

Resolution	LCD colors	CRT colors	Vertical frequency (Hz)
640 x 480	16M/16M	16M/16M	60 75 85 100
800 x 600	16M/16M	16M/16M	60 75 85 100
1024 x 768	16M/16M	16M/16M	60 75 85 100
1280 x 1024 (Virtual)*2	16M/16M	16M/16M	60 75 85 100
1400 x 900*1	16M/16M	16M/16M	60 75 85 100
1600 x 1200 (Virtual)*2	16M/16M	16M/16M	60 75 85 100
1920 x 1440 (Virtual)*2	16M/16M	16M/16M	60 75 85
2048 x 1536 (Virtual)*2	16M/16M	16M/16M	60 75

*1 The 1440 x 900 resolution is only available in LCD, LCD/CRT and LCD/TV display devices.

*2 Only when displaying on LCD.

*3 The Vertical Frequency can change at CRT.

- *Some video modes do not support multimonitor display.*
- *The above table shows typical display modes.*

Table 3 Video modes (WUXGA)

- *Vertical Frequency can be set up when outputting to External Monitor.*
- *The screen may not be displayed properly in high resolution mode while running 3D applications, during DVD playback, etc. Reduce the resolution until the screen is displayed properly in such cases.*

Resolution	LCD colors	CRT colors	Vertical frequency (Hz)
640 x 480	256/256K	256/256K	60 75 85 100
800 x 600	256/256K	256/256K	60 75 85 100
1024 x 768	256/256K	256/256K	60 75 85 100
1280 x 1024	256/256K	256/256K	60 75 85 100
1600 x 1200	256/256K	256/256K	60 75 85 100
1920 x 1200*1	256/256K	256/256K	60 75 85
1920 x 1440 (Virtual)*2	256/256K	256/256K	60 75 85
2048 x 1536 (Virtual)*2	256/256K	256/256K	60 75

*1 The 1920 x 1200 resolution is only available in LCD, LCD/CRT and LCD/TV display devices.
*2 Only when displaying on LCD.
*3 The Vertical Frequency can change at CRT.

- *Some video modes do not support multimonitor display.*
- *The above table shows typical display modes.*

Table 3 Video modes (WUXGA) continued

- *Vertical Frequency can be set up when outputting to External Monitor.*
- *The screen may not be displayed properly in high resolution mode while running 3D applications, during DVD playback, etc. Reduce the resolution until the screen is displayed properly in such cases.*

Resolution	LCD colors	CRT colors	Vertical frequency (Hz)
640 x 480	16M/16M	16M/16M	60 75 85 100
800 x 600	16M/16M	16M/16M	60 75 85 100
1024 x 768	16M/16M	16M/16M	60 75 85 100
1280 x 1024	16M/16M	16M/16M	60 75 85 100
1600 x 1200	16M/16M	16M/16M	60 75 85 100
1920 x 1200*1	16M/16M	16M/16M	60 75 85
1920 x 1440 (Virtual)*2	16M/16M	16M/16M	60 75 85
2048 x 1536 (Virtual)*2	16M/16M	16M/16M	60 75

*1 The 1920 x 1200 resolution is only available in LCD, LCD/CRT and LCD/TV display devices.
*2 Only when displaying on LCD.
*3 The Vertical Frequency can change at CRT.

- *Some video modes do not support multimonitor display.*
- *The above table shows typical display modes.*

Table 3 Video modes (WUXGA) continued

- *Vertical Frequency can be set up when outputting to External Monitor.*
- *The screen may not be displayed properly in high resolution mode while running 3D applications, during DVD playback, etc. Reduce the resolution until the screen is displayed properly in such cases.*

Resolution	LCD colors	CRT colors	Vertical frequency (Hz)
640 x 480	16M/16M	16M/16M	60 75 85 100
800 x 600	16M/16M	16M/16M	60 75 85 100
1024 x 768	16M/16M	16M/16M	60 75 85 100
1280 x 1024	16M/16M	16M/16M	60 75 85 100
1600 x 1200	16M/16M	16M/16M	60 75 85 100
1920 x 1200*1	16M/16M	16M/16M	60 75 85
1920 x 1440 (Virtual)*2	16M/16M	16M/16M	60 75 85
2048 x 1536 (Virtual)*2	16M/16M	16M/16M	60 75

*1 The 1920 x 1200 resolution is only available in LCD, LCD/CRT and LCD/TV display devices.
*2 Only when displaying on LCD.
*3 The Vertical Frequency can change at CRT.

- *Some video modes do not support multimonitor display.*
- *The above table shows typical display modes.*

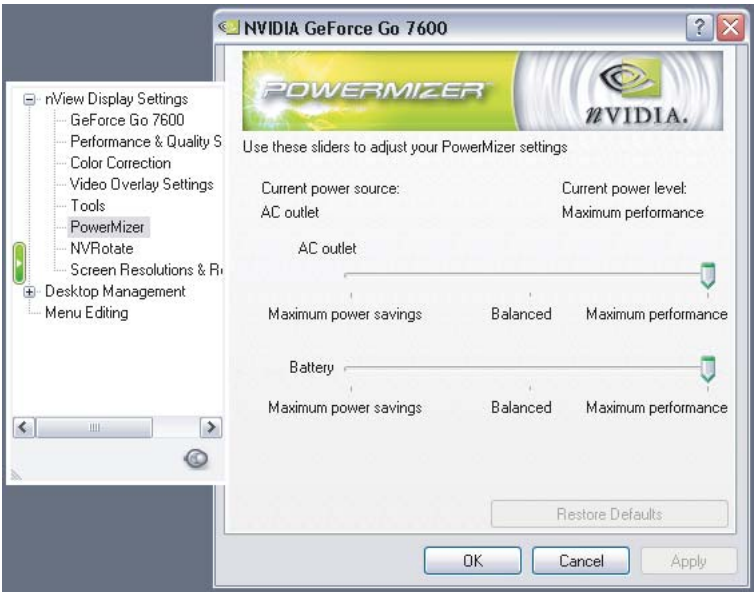
PowerMizer

The PowerMizer function is only available in nVIDIA models.

PowerMizer is a graphics processor installed on this computer. The performance of PowerMizer can be configured in three ways. To define the performance, select the menu options shown below:

Display Properties -> **Settings** -> **Advanced** -> **GeForce Go 7600 tab** -> **GeForce Go 7600 tab** -> **nView Display Settings** -> **PowerMizer**

The graphics processor offers three options, Maximum Power Savings, Balanced and Maximum Performance, in each of the AC power mode and battery power mode.



(Multiple Monitors) and NVIDIA GeForce Go 7600

The actual level may be different from the selected level in some circumstances.

Appendix C

Wireless LAN

This appendix is intended to help you get your Wireless LAN network up and running, with a minimum of parameters.

Card Specifications

Form Factor	PCI Express Mini Card
Compatibility	■ IEEE 802.11 Standard for Wireless LANS ■ Wi-Fi (Wireless Fidelity) certified by the Wi-Fi Alliance. The “Wi-Fi CERTIFIED” logo is a certification mark of the Wi-Fi Alliance.
Network Operating System	■ Microsoft Windows® Networking
Media Access Protocol	■ CSMA/CA (Collision Avoidance) with Acknowledgment (ACK)
Data Rate	■ Theoretical maximum speed: 54Mbps (IEEE802.11a/IEEE802.11g: 11b/g, 11a/b/g combo type) ■ Theoretical maximum speed: 11Mbps (IEEE802.11b)

Radio Characteristics

Radio Characteristics of Wireless LAN Cards may vary according to:

- Country/region where the product was purchased
- Type of product

Wireless communication is often subject to local radio regulations. Although Wireless LAN wireless networking products have been designed for operation in the license-free 2.4GHz and 5GHz band, local radio regulations may impose a number of limitations to the use of wireless communication equipment.

Refer to the sheet "Information to the User" for regulatory information that may apply in your country/region.

R-F Frequency	■ Band 5GHz (5150-5850 MHz) (Revision A) ■ Band 2.4GHz (2400-2483.5 MHz) (Revision B, G)
Modulation Technique	■ DSSS-CCK, DSSS-DQPSK, DSSS-DBPSK (Revision B) ■ OFDM-BPSK, OFDM-QPSK, OFDM-16QAM, OFDM-64QAM (Revision A, G)

The range of the wireless signal is related to the transmit rate of the wireless communication. Communications at lower transmit range may travel larger distances.

- The range of your wireless devices can be affected when the antennas are placed near metal surfaces and solid high-density materials.
- Range is also impacted due to "obstacles" in the signal path of the radio that may either absorb or reflect the radio signal.

Supported Frequency Sub-bands

Subject to the radio regulations that apply in the countries/regions, your Wireless LAN card may support a different set of 5 GHz/2.4 GHz channels. Consult your Authorized Wireless LAN or TOSHIBA Sales office for information about the radio regulations that apply in the countries/regions.

Wireless IEEE 802.11 Channels Sets (Revision B and G)

Frequency Range **Channel ID**	2400-2483.5 MHz
1	2412
2	2417
3	2422
4	2427
5	2432
6	2437
7	2442
8	2447
9	2452
10	**2457*1**
11	2462
12	**2467*2**
13	**2472*2**

*1 Factory-set default channels

*2 Refer to the sheet *Approved Countries/Regions for use* for the countries/regions that in which these channels can be used. When installing Wireless LAN cards, the channel configuration is managed as follows:

- For wireless clients that operate in a Wireless LAN Infrastructure, the Wireless LAN card will automatically start operation at the channel identified by the Wireless LAN Access Point. When roaming between different access points the station can dynamically switch to another channel if required.
- For Wireless LAN cards installed in wireless clients that operating in a peer-to-peer mode, the card will use the default channel 10.

- In a Wireless LAN Access Point, the Wireless LAN card will use the factory-set default channel (printed in bold), unless the LAN Administrator selected a different channel when configuring the Wireless LAN Access Point device.

Wireless IEEE 802.11 Channels Sets (Revision A)

Frequency Range **Channel ID**	5150-5850 MHz
36	5180
40	5200
44	5220
48	5240
52	5260
56	5280
60	5300
64	5320
100	5500
104	5520
108	5540
112	5560
116	5580
120	5600
124	5620
128	5640
132	5660
136	5680
140	5700
149	5745
153	5765
157	5785
161	5805
165	5825

Appendix D

TOSHIBA RAID

TOSHIBA RAID (Redundant Array of Independent Disks) realizes high performance or fault tolerance, which are configured by arraying multiple independent hard disk drives.

2 hard disk drives can be used to construct a RAID configuration (RAID-1: mirroring or RAID-0: Striping).

When using RAID-1 (mirroring), the data is stored twice (once on each of the HDDs) so that even if there are problems with one of the hard disk drives, the other hard disk drive can be used to recover the data.

Please refer to the TOSHIBA RAID help for details.

- *By changing this setting you are reconfiguring your hard disk drive. In which case, all data and programs in the hard disk drive, including the operating system (e.g. Windows), will be erased. If you have data on the hard disk drive that you wish to keep, make a backup of that data onto external media (such as a CD) now. You will not be able to create recovery discs, nor access any data from the hard disk drive after reconfiguring your hard disk drive.*
- *A power-on password can help restrict access to your data. It can also help restrict access to System Setup, where some of your computer's configuration settings are kept. If you do not have a power-on password set, someone with access to it could (i) set a power-on password, locking you out of your own computer, or (ii) change your configuration settings, which could result in data loss. We recommend that you consider using a power-on password.*

Setting up Windows Manually

Use the following procedures to set up your Windows operating system manually.

Before Setting Up Windows

Before setting up Windows, create a TOSHIBA RAID Driver Disk and configure the BIOS setup program.

Creating the TOSHIBA RAID Driver Disk

1. Connect the USB floppy disk drive and insert a floppy disk.
2. From the **start** menu, select **TOSHIBA Application Installer** and click the **Next** button.
3. Select the **TOSHIBA RAID Driver** and click the **Install** button.
4. Specify the folder and click the **Unzip** button.
   The driver file will be copied to the floppy disk.

Configuring the BIOS Setup Program

In the RAID ARRAY setting of the BIOS setup program, make sure the built-in hard disk drive is set to 1RAID-0.

It is not necessary to change the setting if it has already been set as such.

Refer to the *Starting, Modifying and Ending the BIOS Setup Program*, in this chapter.

Windows Setup Procedure

1. Insert the Windows Setup CD-ROM into the optical disc drive and boot the computer up from the optical disc drive. The Windows Setup program will start.
   The Windows Setup program will start.
2. When the message "**Press F6 if you need to install a third party SCSI or RAID driver**" appears on the screen, press the **F6** key.
3. When the message "**Setup will load support for the following mass storage device(s):**" appears on the screen, press the **S** key and install the TOSHIBA RAID Driver using the TOSHIBA RAID Driver Disk that you created.
4. Follow the onscreen instructions to continue setting up windows.

- *Please use only hard disk drives supported by the computer. Correct operations cannot be guaranteed if other hard disk drives are used.*
- *The following types of applications might not work correctly:*
  - *Applications that directly access the hardware and read/write to the hard disk drive.*
  - *Using an operating system such as Linux to run applications that read/write to the hard disk drive.*

- *Boot menu*
  When 2 hard disk drives are connected, it is possible to select which hard disk drive to boot from in the boot menu. However, if a RAID configuration is used, the 2 hard disk drives are recognized as 1 drive and there is no change in the boot configuration no matter which hard disk drive is selected.
- *When using a RAID-1 (mirroring) configuration, the additional hard disk drive's capacity must be equal to or more than the capacity of the existing hard disk drive.*
- *The hard disk drives used in the RAID configuration should not be removed and used in other computers.*
- *When using the RAID-1 (mirroring) configuration, the OS recognizes the lesser capacity of the 2 hard disk drives.*
  For example, if a 60 GB and an 80 GB hard disk drive are used in the mirroring configuration, the OS will recognize the capacity as a 60 GB hard disk drive.
  The additional 20 GB capacity (over the 60 GB hard disk drive) of the 80 GB hard disk drive cannot be used.
- *If a hard disk drive had been replaced, execute the rebuild command and rebuild the RAID-1 (mirroring) configuration.*
- *Implementing the media checking schedule*
  Media checks should be carried out regularly to ensure even more stable operation of the RAID configuration and to make it easier for maintenance and repair measures to be carried out in case of hard disk drive failures.
  For RAID-1 with data redundancy, if a hard disk drive failure occurs, the hard disk drive can be replaced and its data reconstructed from the other hard disk drive which did not fail.
  If there are bad blocks, etc., in the hard disk drive that did not fail, it is possible that portion of data might not be recovered and system down might occur.
  An effective way to ensure that such situations do not happen is to carry out RAID-1 media checks regularly.
  The TOSHIBA RAID utility is set as default to carry out media checks every month on the third Wednesday from noon.

Starting, Modifying and Ending the BIOS Setup Program

Starting the BIOS Setup Program

1. Switch on the computer while pressing the **Esc** key - if the **Password =** prompt is displayed, enter either the Supervisor Password, if one is set, or the User Password and press the **Enter** key. Please refer to Chapter 6, the *TOSHIBA Password Utility* for further details about the User Password.
2. At the **Check system. Then press [F1] key**. prompt, press the **F1** key - the BIOS setup application will start up.

Modifying the BIOS

1. Select the RAID ARRAY setting in the SYSTEM SETUP (3/3) screen.

Please refer to the operating instructions displayed in the settings screen.

2. The settings are explained as follows. Modify the settings as necessary.

Current State	Shows the current hard disk drive status.
Create State	Modify the hard disk drive configuration. (Modifications are made with this setting).
Built-in HDD1	Status of the connected hard disk drive.
Built-in HDD2	Status of the second hard disk drive.

Configuration status and settings

JBOD	No RAID settings. Windows cannot be installed in this disk except for using recovery CD/DVD.
1RAID-0	Set to RAID ready. Windows can be installed in this disk.
2RAID-0	Set to RAID-0 for 2 hard disk drives.
RAID-1	Set to RAID-1 for 2 hard disk drives (Current State Only).
UNKNOWN	A RAID status except for the above status and settings (Current State Only).
No Drive	No hard disk drives connected (Current State Only).

3. The Execute Creation message is displayed once the configuration is modified. Move the cursor to the appropriate location and press the space bar to continue.

Pressing the Home key will revert the modified Create State settings back to the Current State settings.

4. The following message will be displayed. Follow the instructions and press the keys in the following order of **1**, **2**, **3**, **4**, [**Enter**].

Warning: If you change the RAID array, you will need to install the OS again. Are you sure? All data on the HDD(s) will be destroyed. Do you really want to do this? If "Yes", please type the key string which is written in the manual.

Ending the BIOS Setup Program

In order to save the changes you have made and end the BIOS setup application, follow the steps as detailed below:

1. Press the **End** key - this will cause the **Are you sure? (Y/N)**. **The changes you made will cause the system to reboot**. prompt to be displayed at the bottom of the screen.
2. Press the **Y** key - this will save the configuration changes and end the BIOS setup application, automatically restarting the computer.

Appendix E

Bluetooth wireless technology Interoperability

Bluetooth® Cards from TOSHIBA are designed to be interoperable with any product with Bluetooth wireless technology that is based on Frequency Hopping Spread Spectrum (FHSS) radio technology, and is compliant to:

- Bluetooth Specification Ver2.0+EDR, as defined and approved by The Bluetooth Special Interest Group.
- Logo certification with Bluetooth wireless technology as defined by The Bluetooth Special interest Group.

- *Bluetooth wireless technology is a new innovative technology, and TOSHIBA has not confirmed compatibility of its Bluetooth® products with all computers and/or equipment using Bluetooth wireless technology other than TOSHIBA portable computers.*
  Always use Bluetooth® Cards from TOSHIBA in order to enable wireless networks over two or more (up to a total of seven) TOSHIBA portable computers using these cards. Please contact TOSHIBA PC product support on Web site
  http://www.toshiba-europe.com/computers/tnt/bluetooth.htm in Europe or
  http://www.pc.support.global.toshiba.com in the United States for more information.
- *When you use Bluetooth® Cards from TOSHIBA close to 2.4 GHz Wireless LAN devices, Bluetooth transmissions might slow down or cause errors. If you detect certain interference while you use Bluetooth® Cards from TOSHIBA, always change the frequency, move your computer to the area outside of the interference range of 2.4 GHz Wireless LAN devices (40 meters/43.74 yards or more) or stop transmitting from your computer. Please contact TOSHIBA PC product support on Web site*
  http://www.toshiba-europe.com/computers/tnt/bluetooth.htm in Europe or
  http://www.pc.support.global.toshiba.com in the United States for more information.
- *Bluetooth® and Wireless LAN devices operate within the same radio frequency range and may interfere with one another. If you use Bluetooth® and Wireless LAN devices simultaneously, you may occasionally experience a less than optimal network performance or even lose your network connection.*
  If you should experience any such problem, immediately turn off either one of your Bluetooth® or Wireless LAN.
  Please contact TOSHIBA PC product support on web site
  http://www.toshiba-europe.com/computers/tnt/bluetooth.htm in Europe or
  http://www.pc.support.global.toshiba.com in the United States for more information.

Bluetooth wireless technology and your Health

The products with Bluetooth wireless technology, like other radio devices, emit radio frequency electromagnetic energy. The level of energy emitted by devices with Bluetooth wireless technology however is far much less than the electromagnetic energy emitted by wireless devices like for example mobile phones.

Because products with Bluetooth wireless technology operate within the guidelines found in radio frequency safety standards and recommendations, TOSHIBA believes Bluetooth wireless technology is safe for use by consumers. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature.

In some situations or environments, the use of Bluetooth wireless technology may be restricted by the proprietor of the building or responsible representatives of the organization. These situations may for example include:

- Using the equipment with Bluetooth wireless technology on board of airplanes, or
- In any other environment where the risk of interference to other devices or services is perceived or identified as harmful.

If you are uncertain of the policy that applies on the use of wireless devices in a specific organization or environment (e.g. airports), you are encouraged to ask for authorization to use the device with Bluetooth wireless technology prior to turning on the equipment.

Regulatory statements

General

This product complies with any mandatory product specification in any country/region where the product is sold. In addition, the product complies with the following.

European Union (EU) and EFTA

This equipment complies with the R&TTE directive 1999/5/EC and has been provided with the CE mark accordingly.

Canada - Industry Canada (IC)

This device complies with RSS 210 of Industry Canada.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device.

L'utilisation de ce dispositif est autorisée seulement aux conditions suivantes: (1) il ne doit pas produire de brouillage et (2) l'utilisateur du dispositif doit étre prét à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

The term "IC" before the equipment certification number only signifies that the Industry Canada technical specifications were met.

USA-Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the distance between the equipment and the receiver.
- Connect the equipment to outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

TOSHIBA is not responsible for any radio or television interference caused by unauthorized modification of the devices included with this Bluetooth® Card from TOSHIBA, or the substitution or attachment of connecting cables and equipment other than specified by TOSHIBA.

The correction of interference caused by such unauthorized modification, substitution or attachment will be the responsibility of the user.

Caution: Exposure to Radio Frequency Radiation

The radiated output power of the Bluetooth® Card from TOSHIBA is far below the FCC radio frequency exposure limits. Nevertheless, the Bluetooth® Card from TOSHIBA shall be used in such a manner that the potential for human contact during normal operation is minimized. The antenna(s) used in this device are located at the upper edge of the LCD screen, and this device has been tested as portable device as defined in Section 2.1093 of FCC rules when the LCD screen is rotated 180 degree and covered the keyboard area. In addition, Bluetooth has been tested with Wireless LAN transceiver for co-location requirements. This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter. The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's website www.hc-sc.gc.ca/rpb.

Taiwan

Article 12 Without permission granted by the DGT, any company, enterprise, or user is not allowed to change frequency, enhance transmitting power or alter original characteristic as well as performance to an approved low power radio-frequency devices.

Article 14 The low power radio-frequency devices shall not influence aircraft security and interfere legal communications; If found, the user shall cease operating immediately until no interference is achieved.

The said legal communications means radio communications is operated in compliance with the Telecommunications Act.

The low power radio-frequency devices must be susceptible with the interference from legal communications or ISM radio wave radiated devices.

Using Bluetooth® Card from TOSHIBA equipment in Japan

In Japan, the frequency bandwidth of 2,400 - 2,483.5 MHz for second generation low-power data communication systems such as this equipment overlaps that of mobile object identification systems (premises radio station and specified low-power radio station).

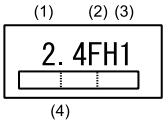
1. Sticker

Please put the following sticker on computer incorporating this product.

> The frequency bandwidth of this equipment may operate within the same range as industrial devices, scientific devices, medical devices, microwave ovens, licensed radio stations and non-licensed specified low-power radio stations for mobile object identification systems (RFID) used in factory production lines (Other Radio Stations).
>
> 1. Before using this equipment, ensure that it does not interfere with any of the equipment listed above.
> 2. If this equipment causes RF interference to other radio stations, promptly change the frequency being used, change the location of use, or turn off the source of emissions.
> 3. Contact TOSHIBA Direct PC if you have problems with interference caused by this product to Other Radio Stations.

2. Indication

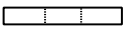
The indication shown below appears on this equipment.



(1) 2.4: This equipment uses a frequency of 2.4 GHz.

(2) FH: This equipment uses FH-SS modulation.

(3) 1: The interference range of this equipment is less than 10 m.

(4)  This equipment uses a frequency bandwidth from 2,400 MHz to 2,483.5 MHz.

It is impossible to avoid the band of mobile object identification systems.

3. TOSHIBA Direct PC

Monday - Friday	: 10:00-17:00
Toll Free Tel	: 0120-15-1048
Direct Dial	: 03-3457-4850
FAX	: 03-3457-4868

Device Authorization

This device obtains the Technical Conditions Compliance Approval, and it belongs to the device class of radio equipment of low-power data communication system radio station stipulated in the Telecommunications Business Law.

The Name of the radio equipment: EYXF3CS

JAPAN APPROVALS INSTITUTE FOR TELECOMMUNICATIONS EQUIPMENT

Approval Number: D05-0074001

The following restrictions apply:

Do not disassemble or modify the device.

Do not install the embedded wireless module into other device.

Appendix F

AC Power Cord and Connectors

The power cord's AC input plug must be compatible with the various international AC power outlets and the cord must meet the standards for the country/region in which it is used. All cords must meet the following specifications:

Length:	Minimum 2 meters
Wire size:	Minimum 0.75 mm^2
Current rating:	Minimum 2.5 amperes
Voltage rating:	125 or 250 VAC (depending on country/region's power standards)

Certification agencies

U.S. and Canada:	UL listed and CSA certified No. 18 AWG, Type SVT or SPT-2
Australia:	AS
Japan:	DENANHO

Europe:

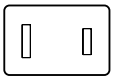
Austria:	OVE	**Italy:**	IMQ
Belgium:	CEBEC	**The Netherlands:**	KEMA
Denmark:	DEMKO	**Norway:**	NEMKO
Finland:	FIMKO	**Sweden:**	SEMKO
France:	LCIE	**Switzerland:**	SEV
Germany:	VDE	**United Kingdom:**	BSI

In Europe, two conductors power cord must be VDE type, H05VVH2-F or H03VVH2-F and for three conductors power cord must be VDE type, H05VV-F.

For the United States and Canada, two pin plug configuration must be a 2-15P (250V) or 1-15P (125V) and three pin plug configuration must be 6-15P (250V) or 5-15P (125V) as designated in the U.S. National Electrical code handbook and the Canadian Electrical Code Part II.

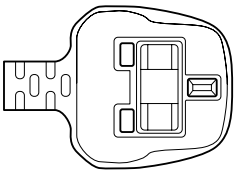
The following illustrations show the plug shapes for the U.S.A. and Canada, the United Kingdom, Australia and Europe.

USA and Canada



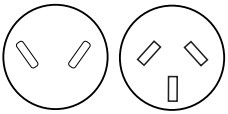
UL approved

United Kingdom



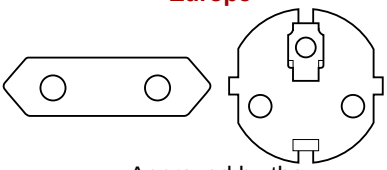
BS approved

Australia



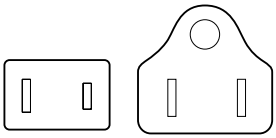
AS approved

Europe



Approved by the appropriate agency

Canada



CSA approved

Appendix G

Usage Restrictions

This appendix describes the Usage Restrictions.

- This configuration is designed to work with a signal from a conventional (standard or analog) TV antenna.
- TOSHIBA does not guarantee that signals received by satellite or cable TV receivers will work properly and does not provide technical support for them.
- The TOSHIBA Qosmio's AC power adaptor must be connected to get the best possible audio and video performance.
- For copyright protection reasons, TOSHIBA has incorporated CGMS (Copy Generation Management System) restrictions into this product. This allows a broadcasting channel to send a signal to prevent a motion picture from being copied.
- The Microsoft® Windows® XP Media Center Edition's radio features cannot be used because the TV feature does not include a radio receiver (FM tuner).
- It is not possible to record a TV program on one channel and simultaneously view a TV program on another channel because the computer only has one TV feature. However, it is possible to view one recorded TV program and simultaneously record another.
- The TV feature lets you capture and record a video stream (S-Video/Composite Video) from a camcorder, DVD player, etc. Because of the large number of peripherals currently on the market, TOSHIBA does not guarantee that this type of configuration will work properly and does not provide support for this functionality.
- Teletext functionality is not supported.

Appendix H

If your computer is stolen

Always take care of your computer and try to prevent it from being stolen. You are the owner of a valuable technical device, which may be highly attractive to thieves, so please do not leave it unattended in a public place. To further help protect against theft, security cables can be bought for use with your notebook when it is being used at home or in the office.

Make a note of your computer's machine type, model number, and serial number, and put it in a safe place. You will find this information on the underside of your notebook. Please also keep the receipt of the computer you purchased.

Should your computer be stolen, however, we'll help you try to find it. Before contacting TOSHIBA, please prepare the following information which is necessary to uniquely identify your computer:

- In which country was your computer stolen?
- What type of machine do you have?
- What was the model number (PA number)?
- What was the serial number (8 digits)?
- When was it stolen, i.e. date?
- What is your address, phone, and fax number?

To register the theft on paper, please follow these procedures:

- Fill in the TOSHIBA Theft Registration form (or a copy of it) below.
- Attach a copy of your receipt showing where your computer was purchased.
- Either fax or send the receipt and registration form to the address below.

To register the theft online, please follow these procedures:

- Visit www.toshiba-europe.com on the Internet. In the product area, choose **Computer Systems**.
- In the Computer Systems page, open the **Support & Downloads** menu and choose the **Stolen Units Database** option.

Your entries are used to track your computer at our service points.

TOSHIBA Theft Registration

Send to: TOSHIBA Europe GmbH
Technical Service and Support
Leibnizstr. 2
93055 Regensburg
Germany

Fax number: +49 (0) 941 7807 921

Country stolen:	
Machine type: (e.g. Satellite A50)	
Model number: (e.g. PSA50 YXT)	
Serial number: (e.g. 12345678G)	
Date stolen:	Year Month Day

Owner's details

Last name, first name:	
Company:	
Street:	
Postal Code/City:	
Country:	
Phone:	
Fax:	

Glossary

The terms in this glossary cover topics related to this manual. Alternate naming is included for reference.

Abbreviations

AC: alternating current

AGP: accelerated graphics port

ANSI: American National Standards Institute

APM: advanced power manager

ASCII: American Standard Code for Information Interchange

BIOS: basic input output system

CD-ROM: Compact Disc Read Only Memory

CD-RW: Compact Disc ReWritable

CMOS: complementary metal-oxide semiconductor

CPU: central processing unit

CRT: cathode ray tube

DC: direct current

DDC: display data channel

DMA: direct memory access

DOS: disk operating system

DVD: digital versatile disc

DVD-R: Digital Versatile Disc Recordable

DVD-RAM: Digital Versatile Disc Random Access Memory

DVD-R (Dual Layer): Digital Versatile Disc Recordable Dual Layer

DVD-ROM: Digital Versatile Disc Read Only Memory

DVD-RW: Digital Versatile Disc ReWritable

DVD+R (Double Layer): Digital Versatile Disc Recordable Double Layer

ECP: extended capabilities port

FDD: floppy diskette drive

FIR: fast infrared

HDD: hard disk drive

IDE: integrated drive electronics

I/O: input/output

IrDA: Infrared Data Association

IRQ: interrupt request
KB: kilobyte
LCD: liquid crystal display
LED: light emitting diode
LSI: large scale integration
MB: megabyte
OCR: optical character recognition (reader)
PCB: printed circuit board
PCI: peripheral component interconnect
RAM: random access memory
RGB: red, green, and blue
ROM: read only memory
RTC: real time clock
SCSI: small computer system interface
SIO: serial input/output
TFT: thin-film transistor
UART: universal asynchronous receiver/transmitter
USB: Universal Serial Bus
VESA: Video Electronic Standards Association
VGA: video graphics array
VRT: voltage reduction technology
WXGA+: wide extended graphics array plus
WUXGA: wide ultra extended graphics array
XGA: extended graphics array

A

adaptor: A device that provides an interface between two dissimilar electronic devices. For example, the AC adaptor modifies the power from a wall outlet for use by the computer. This term also refers to the add-in circuit cards that control external devices, such as video monitors and magnetic tape devices.

allocate: To assign a space or function for a specific task.

alphanumeric: Keyboard characters including letters, numbers and other symbols, such as punctuation marks or mathematical symbols.

alternating current (AC): Electric current that reverses its direction of flow at regular intervals.

analog signal: A signal whose characteristics such as amplitude and frequency vary in proportion to (are an analog of) the value to be transmitted. Voice communications are analog signals.

ANSI: American National Standards Institute. An organization established to adopt and define standards for a variety of technical disciplines. For example, ANSI defined the ASCII standard and other information processing requirements.

antistatic: A material used to prevent the buildup of static electricity.

application: A group of programs that together are used for a specific task such as accounting, financial planning, spreadsheets, word processing and games.

ASCII: American Standard Code for Information Interchange. ASCII code is a set of 256 binary codes that represent the most commonly used letters, numbers, and symbols.

async: Short for asynchronous.

asynchronous: Lacking regular time relationship. As applied to computer communications, asynchronous refers to the method of transmitting data that does not require a steady stream of bits to be transmitted at regular time intervals.

B

backup: A duplicate copy of files kept as a spare in case the original is destroyed.

batch file: A file that can be executed from the system prompt containing a sequence of operating system commands or executable files.

binary: The base two number system composed of zeros and ones (off or on), used by most digital computers. The right-most digit of a binary number has a value of 1, the next a value of 2, then 4, 8, 16, and so on. For example, the binary number 101 has a value of 5. *See also* ASCII.

BIOS: Basic Input Output System. The firmware that controls data flow within the computer. *See also* firmware.

bit: Derived from “binary digit,” the basic unit of information used by the computer. It is either zero or one. Eight bits is one byte. *See also* byte.

board: A circuit board. An internal card containing electronic components, called chips, which perform a specific function or increase the capabilities of the system.

boot: Short for bootstrap. A program that starts or restarts the computer. The program reads instructions from a storage device into the computer’s memory.

bps: Bits per second. Typically used to describe the data transmission speed of a modem.

buffer: The portion of the computer’s memory where data is temporarily stored. Buffers often compensate for differences in the rate of flow from one device to another.

bus: An interface for transmission of signals, data or electric power.

byte: The representation of a single character. A sequence of eight bits treated as a single unit; also the smallest addressable unit within the system.

C

cache memory: High speed memory which stores data that increases processor speed and data transfer rate. When the CPU reads data from main memory, it stores a copy of this data in cache memory. The next time the CPU needs that same data, it looks for it in the cache memory rather than the main memory, which saves time. The computer has two cache levels. Level one is incorporated into the processor and level two resides in external memory.

capacity: The amount of data that can be stored on a magnetic storage device such as a floppy diskette or hard disk drive. It is usually described in terms of kilobytes (KB), where one KB = 1024 bytes and megabytes (MB), where one MB = 1024 KB.

card: Synonym for board. *See* board.

CardBus: An industry standard bus for 32-bit PC Cards.

CD-ROM: A Compact Disc Read Only Memory is a high capacity disc that can be read from but not written to. The CD-ROM drive uses a laser, rather than magnetic heads, to read data from the disc.

CD-R: A Compact Disc Recordable disc can be written once and read many times. See also CD-ROM.

CD-RW: A Compact Disc ReWritable disc can be rewritten many times. *See* also CD-ROM.

character: Any letter, number, punctuation mark, or symbol used by the computer. Also synonymous with byte.

chassis: The frame containing the computer.

chip: A small semiconductor containing computer logic and circuitry for processing, memory, input/output functions and controlling other chips.

CMOS: Complementary Metal-Oxide Semiconductor. An electronic circuit fabricated on a silicon wafer that requires very little power. Integrated circuits implemented in CMOS technology can be tightly packaged and are highly reliable.

cold start: Starting a computer that is currently off (turning on the power).

COM1, COM2, COM3 and COM4: The names assigned to the serial and communication ports.

commands: Instructions you enter at the terminal keyboard that direct the actions of the computer or its peripheral devices.

communications: The means by which a computer transmits and receives data to and from another computer or device.

compatibility: 1) The ability of one computer to accept and process data in the same manner as another computer without modifying the data or the media upon which it is being transferred.
2) the ability of one device to connect to or communicate with another system or component.

components: Elements or parts (of a system) which make up the whole (system).

Composite Video (YUV): A standard video signal used to transmit images, e.g. from a VCR to a TV.

computer program: A set of instructions written for a computer that enable it to achieve a desired result.

computer system: A combination of hardware, software, firmware, and peripheral components assembled to process data into useful information.

configuration: The specific components in your system (such as the terminal, printer, and disk drives) and the settings that define how your system works. You use the HW Setup program to control your system configuration.

control keys: A key or sequence of keys you enter from the keyboard to initiate a particular function within a program.

controller: Built-in hardware and software that controls the functions of a specific internal or peripheral device (e.g. keyboard controller).

co-processor: A circuit built into the processor that is dedicated to intensive math calculations.

CPS: Characters Per Second. Typically used to indicate the transmission speed of a printer.

CPU: Central Processing Unit. The portion of the computer that interprets and executes instructions.

CRT: Cathode Ray Tube. A vacuum tube in which beams projected on a fluorescent screen-producing luminous spots. An example is the television set.

cursor: A small, blinking rectangle or line that indicates the current position on the display screen.

D

data: Information that is factual, measurable or statistical that a computer can process, store, or retrieve.

data bits: A data communications parameter controlling the number of bits (binary digits) used to make up a byte. If data bits = 7 the computer can generate 128 unique characters. If data bits = 8 the computer can generate 256 unique characters.

DC: Direct Current. Electric current that flows in one direction. This type of power is usually supplied by batteries.

default: The parameter value automatically selected by the system when you or the program do not provide instructions. Also called a preset value.

delete: To remove data from a disk or other data storage device. Synonymous with erase.

device driver: A program that controls communication between a specific peripheral device and the computer. The CONFIG.SYS file contains device drivers that MS-DOS loads when you turn the computer on.

dialog box: A window that accepts user input to make system settings or record other information.

Digital Audio: An audio compression standard that enables high-quality transmission and real-time playback of sound files.

disk drive: The device that randomly accesses information on a disk and copies it to the computer's memory. It also writes data from memory to the disk. To accomplish these tasks, the unit physically rotates the disk at high speed past a read-write head.

disk storage: Storing data on magnetic disk. Data is arranged on concentric tracks much like a phonograph record.

display: A CRT, LCD, or other image producing device used to view computer output.

documentation: The set of manuals and/or other instructions written for the users of a computer system or application. Computer system documentation typically includes procedural and tutorial information as well as system functions.

DOS: Disk Operating System. *See* operating system.

driver: A software program, generally part of the operating system, that controls a specific piece of hardware (frequently a peripheral device such as a printer or mouse).

DVB-T (Digital Video Broadcasting - Terrestrial): Also known as terrestrial digital TV. Digital TV broadcasting standard.

DVD-R (+R, -R): A Digital Versatile Disc Recordable disk can be written once and read many times. The DVD-R drive uses a laser to read data from the disc.

DVD-RAM: A Digital Versatile Disc Random Access Memory is a high-capacity, high performance disc that lets you store large volumes of data. The DVD-RAM drive uses a laser to read data from the disc.

DVD-R (Dual Layer): A disc having two layers on one side with the DVD-R storage capacity about 1.8 times larger than before. The DVD-RW drive uses a laser to read data from the disc.

DVD-ROM: A Digital Versatile Disc Read Only Memory is a high capacity, high performance disc suitable for play back of video and other high-density files. The DVD-ROM drive uses a laser to read data from the disc.

DVD-RW (+RW, -RW): A Digital Versatile Disc ReWritable disc can be rewritten many times.

DVD+R (Double Layer): A disc having two layers on one side with the DVD+R storage capacity about 1.8 times larger than before. The DVD-RW drive uses a laser to read data from the disc.

E

echo: To send back a reflection of the transmitted data to the sending device. You can display the information on the screen, or output it to the printer, or both. When a computer receives back data it transmitted to a CRT (or other peripheral device) and then retransmits the data to printer, the printer is said to echo the CRT.

erase: *See* delete.

escape: 1) A code (ASCII code 27), signaling the computer that what follows are commands; used with peripheral devices such as printers and modems.
2) A means of aborting the task currently in progress.

escape guard time: A time before and after an escape code is sent to the modem which distinguishes between escapes that are part of the transmitted data, and escapes that are intended as a command to the modem.

execute: To interpret and execute an instruction.

Extended Capability Port: An industry standard that provides a data buffer, switchable forward and reverse data transmission, and run length encoding (RLE) support.

F

fast infrared: An industry standard that enables cableless infrared serial data transfer at speeds of up to 4 Mbps.

file: A collection of related information; a file can contain data, programs, or both.

firmware: A set of instructions built into the hardware which controls and directs a microprocessor's activities.

floppy diskette: A removable disk that stores magnetically encoded data.

floppy diskette drive (FDD): An electromechanical device that reads and writes to floppy diskettes.

Fn-esse: A TOSHIBA utility that lets you assign functions to hot keys.

folder: An icon in Windows used to store documents or other folders.

format: The process of readying a blank disk for its first use. Formatting establishes the structure of the disk that the operating system expects before it writes files or programs onto the disk.

function keys: The keys labeled **F1** through **F12** that tell the computer to perform certain functions.

G

gigabyte (GB): A unit of data storage equal to 1024 megabytes. *See also* megabyte.

graphics: Drawings, pictures, or other images, such as charts or graphs, to present information.

H

hard disk: A non-removable disk usually referred to as drive C. The factory installs this disk and only a trained engineer can remove it for servicing. Also called fixed disk.

hard disk drive (HDD): An electromechanical device that reads and writes a hard disk. *See also* hard disk.

hardware: The physical electronic and mechanical components of a computer system: typically, the computer itself, external disk drives, etc. *See also* software and firmware.

hertz: A unit of wave frequency that equals one cycle per second.

hexadecimal: The base 16 numbering system composed of the digits 0 through 9 and the letters A, B, C, D, E, and F.

host computer: The computer that controls, regulates, and transmits information to a device or another computer.

hot key: The computer's feature in which certain keys in combination with the extended function key, **Fn**, can be used to set system parameters, such as speaker volume.

HW Setup: A TOSHIBA utility that lets you set the parameters for various hardware components.

I

icon: A small graphic image displayed on the screen or in the indicator panel. In Windows, an icon represents an object that the user can manipulate.

i.LINK (IEEE1394): This port enables high-speed data transfer directly from external devices such as digital video cameras.

input: The data or instructions you provide to a computer, communication device or other peripheral device from the keyboard or external or internal storage devices. The data sent (or output) by the sending computer is input for the receiving computer.

instruction: Statements or commands that specify how to perform a particular task.

interface: 1) Hardware and/or software components of a system used specifically to connect one system or device to another.
2) To physically connect one system or device to another to exchange information.
3) The point of contact between user, the computer, and the program, for example, the keyboard or a menu.

interrupt request: A signal that gives a component access to the processor.

I/O: Input/output. Refers to acceptance and transfer of data to and from a computer.

I/O devices: Equipment used to communicate with the computer and transfer data to and from it.

IrDA 1.1: An industry standard that enables cableless infrared serial data transfer at speeds of up to 4 Mbps.

J

jumper: A small clip or wire that allows you to change the hardware characteristics by electrically connecting two points of a circuit.

K

K: Taken from the Greek word kilo, meaning 1000; often used as equivalent to 1024, or 2 raised to the 10th power. *See also* byte and kilobyte.

KB: *See* kilobyte.

keyboard: An input device containing switches that are activated by manually pressing marked keys. Each keystroke activates a switch that transmits a specific code to the computer. For each key, the transmitted code is, in turn, representative of the (ASCII) character marked on the key.

kilobyte (KB): A unit of data storage equal to 1024 bytes. *See also* byte and megabyte.

L

level 2 cache: *See* cache.

Light Emitting Diode (LED): A semiconductor device that emits light when a current is applied.

Liquid Crystal Display (LCD): Liquid crystal sealed between two sheets of glass coated with transparent conducting material. The viewing-side coating is etched into character forming segments with leads that extend to the edge of the glass. Applying a voltage between the glass sheets alters the brightness of the liquid crystal.

LSI: Large Scale Integration.
1) A technology that allows the inclusion of up to 100,000 simple logic gates on a single chip.
2) An integrated circuit that uses large scale integration.

M

main board: *See* motherboard.

megabyte (MB): A unit of data storage equal to 1024 kilobytes. *See also* kilobyte.

megahertz: A unit of wave frequency that equals 1 million cycles per second. *See also* hertz.

menu: A software interface that displays a list of options on the screen. Also called a screen.

microprocessor: A hardware component contained in a single integrated circuit that carries out instructions. Also called the central processing unit (CPU), one of the main parts of the computer.

mode: A method of operation, for example, the Boot Mode, Standby Mode or the Hibernation Mode.

modem: Derived from modulator/demodulator, a device that converts (modulates) digital data for transmission over telephone lines and then converts modulated data (demodulates) to digital format where received.

monitor: A device that uses rows and columns of pixels to display alphanumeric characters or graphic images. *See also* CRT.

motherboard: A name sometimes used to refer to the main printed circuit board in processing equipment. It usually contains integrated circuits that perform the processor's basic functions and provides connectors for adding other boards that perform special functions. Sometimes called a main board.

N

non-system disk: A formatted floppy diskette you can use to store programs and data but you cannot use to start the computer. *See* system disk.

nonvolatile memory: Memory, usually read-only (ROM), that is capable of permanently storing information. Turning the computer's power off does not alter data stored in nonvolatile memory.

numeric keypad overlay: A feature that allows you to use certain keys on the keyboard to perform numeric entry, or to control cursor and page movement.

O

OCR: Optical Character Recognition (reader). A technique or device that uses laser or visible light to identify characters and input them into a storage device.

online state: A functional state of a peripheral device when it is ready to receive or transmit data.

operating system: A group of programs that controls the basic operation of a computer. Operating system functions include interpreting programs, creating data files, and controlling the transmission and receipt (input/output) of data to and from memory and peripheral devices.

output: The results of a computer operation. Output commonly indicates data.
1) printed on paper, 2) displayed at a terminal, 3) sent through the serial port of internal modem, or 4) stored on some magnetic media.

P

PAL: PAL (Phase Alternating Line) is the dominant video and broadcasting standard in Europe.

parity: 1) The symmetrical relationship between two parameter values (integers) both of which are either on or off; odd or even; 0 or 1.
2) In serial communications, an error detection bit that is added to a group of data bits making the sum of the bits even or odd. Parity can be set to none, odd, or even.

password: A unique string of characters used to identify a specific user. The computer provides various levels of password protection such as user and supervisor.

pel: The smallest area of the display that can be addressed by software. Equal in size to a pixel or group of pixels. *See* pixel.

peripheral component interconnect: An industry standard 32-bit bus.

peripheral device: An I/O device that is external to the central processor and/or main memory such as a printer or a mouse.

Péritel: Péritel is a 21-pin connecting cable/port system that allows images and high-quality stereo sound (including Dolby® Pro-Logic sound formats) to be sent from one audio-visual device to another. It is also known as a “SCART connector” or “Euro connector”.

pixel: A picture element. The smallest dot that can be made on a display or printer. Also called a pel.

plug and play: A capability with Windows that enables the system to automatically recognize connections of external devices and make the necessary configurations in the computer.

port: The electrical connection through which the computer sends and receives data to and from devices or other computers.

Power Saver Utility: A TOSHIBA utility that lets you set the parameters for various power-saving functions.

printed circuit board (PCB): A hardware component of a processor to which integrated circuits and other components are attached. The board itself is typically flat and rectangular, and constructed of fiberglass, to form the attachment surface.

program: A set of instructions a computer can execute that enables it to achieve a desired result. *See also* application.

prompt: A message the computer provides indicating it is ready for or requires information or an action from you.

R

Radio frequency interference (RFI) shield: A metal shield enclosing the printed circuit boards of the printer or computer to prevent radio and TV interference. All computer equipment generates radio frequency signals. The FCC regulates the amount of signals a computing device can allow past its shielding. A Class A device is sufficient for office use. Class B provides a more stringent classification for home equipment use. TOSHIBA portable computers comply with Class B computing device regulations.

Random Access Memory (RAM): High speed memory within the computer circuitry that can be read or written to.

restart: Resetting a computer without turning it off (also called “warm boot” or “soft reset”). *See also* boot.

RGB: Red, green and blue. A device that uses three input signals, each activating an electron gun for a primary additive color (red, green and blue) or port for using such a device. *See also* CRT.

RJ11: A modular telephone jack.

RJ45: A modular LAN jack.

ROM: Read Only Memory: A nonvolatile memory chip manufactured to contain information that controls the computer’s basic operation. You cannot access or change information stored in ROM.

S

S-Video: Short for *Super-Video*, a type of connection used by S-VHS videocassette players, camcorders, DVD players, etc. to transmit high-quality video signals.

SCSI: Small Computer System Interface is an industry standard interface for connection of a variety of peripheral devices.

SD Card: Secure Digital cards are flash memory widely used in a variety of digital devices such as digital cameras and Personal Digital Assistants.

SECAM L: SECAM (Sequential Color Memory) is a broadcasting standard used in France.

serial communications: A communications technique that uses as few as two interconnecting wires to send bits one after another.

serial interface: Refer to a type of information exchange that transmits information sequentially, one bit at a time.

SIO: Serial Input/Output. The electronic methodology used in serial data transmission.

soft key: Key combinations that emulate keys on the IBM keyboard, change some configuration options, stop program execution, and access the numeric keypad overlay.

software: The set of programs, procedures and related documentation associated with a computer system. Specifically refers to computer programs that direct and control the computer system's activities. *See also* hardware.

stop bit: One or more bits of a byte that follow the transmitted character or group codes in asynchronous serial communications.

subpixel: Three elements, one red, one green and blue (RGB), that make up a pixel on the color LCD. The computer sets subpixels independently, each may emit a different degree of brightness. *See also* pixel.

synchronous: Having a constant time interval between successive bits, characters or events.

system disk: A disk that has been formatted with an operating system. For MS-DOS the operating system is contained in two hidden files and the COMMAND.COM file. You can boot a computer using a system disk. Also called an operating system disk.

T

terminal: A typewriter-like keyboard and CRT display screen connected to the computer for data input/output.

TFT display: A liquid crystal display (LCD) made from an array of liquid crystal cells using active-matrix technology with thin film transistor (TFT) to drive each cell.

Touch Pad: A pointing device integrated into the TOSHIBA computer palm rest.

TTL: Transistor-transistor logic. A logic circuit design that uses switching transistors for gates and storage.

U

Universal Serial Bus: This serial interface lets you communicate with several devices connected in a chain to a single port on the computer.

V

VGA: Video Graphics Array is an industry standard video adaptor that lets you run any popular software.

volatile memory: Random access memory (RAM) that stores information as long as power is supplied to the computer.

W

warm start: Restarting or resetting a computer without turning it off.

window: A portion of the screen that can display its own application, document or dialog box. Often used to mean a Microsoft Windows window.

Wireless LAN: Local Area Network (LAN) through wireless communication.

write protection: A method for protecting a floppy diskette from accidental erasure.

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